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ABSTRACT

This feasibility study and final report is divided into eight major parts. Part 1, a synopsis of the adaptation in Oregon of a ComField based elementary teacher education program (ED 026 305-ED 026 331), defines the characteristics of the program as competency-based, field-centered, personalized, and systematically designed and operated. It includes a synopsis of the proposed program, and judgments as to the feasibility of implementing the program within the OCE (Oregon College of Education) coalition and on a state-wide basis. Part 2 considers the Oregon College of Education as a context within which to implement the program. Part 3 details the structure and content of the curriculum. Part 4 concerns the operational mechanisms (instructional, support, program management, and changeover) designed to carry the program. Part 5 describes a 5-year plan for implementing the program, and part 6 gives the estimated cost. Part 7 is a preliminary plan for implementing the program on a state-wide basis, and part 8 contains notes on maximizing the influence of demonstration programs on teacher education regionally and nationally. (MBM)

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A PLAN FOR MANAGING THE DEVELOPMENT,
IMPLEMENTATION AND OPERATION OF A MODEL
ELEMENTARY TEACHER EDUCATION PROGRAM

VOLUME I -- Report of the Project

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Oregon College of Education
Monmouth, Oregon
February, 1970

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FOREWORD

I am pleased to be asked to enter a statement concerning the Comfield project in elementary education in the Oregon State System of Higher Education. The Comfield project, from its inception to the present stage of its development, has been a significant unifying force in teacher education in the state. It has brought the institutions of the state system of higher education into a close and productive working relationship as they have re-thought together the bases of elementary teacher education and have evolved the concept of a competency based, field centered, systems approach to elementary teacher education.

The initial concept grew out of a cooperative effort of the teacher education institutions. At a given point in this interinstitutional cooperative venture, the six teacher education institutions of the Oregon State System of Higher Education agreed that the focus on planning for implementation ought to be centered at the Oregon College of Education at Monmouth whose primary institutional focus is teacher education, and which has situated on its campus the resources of the state system's Division of Teaching Research. It was agreed, however, that teacher education representatives of all six institutions and one private institution ought to be kept abreast of developments at Monmouth, and ought to have a hand in aspects of the planning.

And so it is that the Comfield project has moved ahead at Monmouth, with institutional representatives from all six state system teacher education institutions, a private teacher education institution, participating public schools and the state department of education all involved. It has not been easy. But it has been immensely stimulating.

More, the Comfield concept has become known among those outside of teacher education circles. It was only this past week that an institutional request for authorization to launch an experimental honors type program cited the Comfield project as the model upon which the proposed program would be based.

The Comfield project in elementary teacher education is far from completed. But significant strides have been made in planning the implementation of this concept in the Oregon College of Education. And from this experience, the other teacher education institutions of the state - both public and private - have gained greatly from the outreach that this experience has given them. The Comfield concept has been a great benefactor to the state system of education. No one can now foretell where its influence will stop.

Miles C. Romney
Vice Chancellor
Office of Academic Affairs
Oregon State System of Higher Education

FOREWORD

Progress toward the goals outlined in the following report is already evident here. Many of the proposed curriculum developments clearly are extensions of instructional patterns which are well established at OCE. Some of the untested new procedures may prove to be impracticable, and others may not work as planned. I am confident, however, that all will be tried out in the foreseeable future, here or elsewhere, whether-or-not the staggering cost estimates are immediately provided.

Leonard W. Rice
President
Oregon College of Education

PREFACE

In the fall of 1967 the U.S. Office of Education initiated a three-phased project designed to provide outstanding programs for the professional education of elementary teachers. The first phase of the project was to develop program models, the second to test their feasibility, and the third, depending upon the results of the feasibility study, to implement two to four model based programs. These would serve as demonstration programs for elementary teacher education across the nation. The rationale underlying the models program was stated as follows:

Because of the key role that teachers play in facilitating learning, particularly with young children, he/she must have the most up to date theoretical and substantive knowledge and professional skills to perform successfully. To date, research and development activities have generated new knowledge, materials, and methodologies with great potential for improving the effectiveness and efficiency of the teaching-learning process. If funds are made available, institutions should be able at this time to completely restructure their teacher education programs to include the best of what is now known and available (from page 1 of the request for Phase I proposals).

Phase I of the project, to be completed by October 31, 1968, was to produce general conceptual models or blueprints for exemplary teacher education programs. In the request for proposals to develop such models the task was defined as preparing "...educational specifications for a comprehensive undergraduate and in-service education program for elementary teachers." In the context of the request elementary education included pre-school, primary and intermediate grades. However, there were two constraints under which the developers of the models were to operate:

- 1) a "systems analysis" approach was to be used in their development, and
- 2) the models were to be prepared "...in sufficient detail to enable ready development into operating programs and full implementation by other institutions that train teachers."

The U.S.O.E.'s request resulted in the submission of some 80 design proposals from colleges, universities, and educational research and development agencies throughout the nation. Nine of these proposals were eventually funded to support Phase I development. The proposals which received funding support were those submitted by Florida State University, Michigan State University, Syracuse University, Toledo University, the University of Georgia, the University of Massachusetts,

the University of Pittsburgh, Teachers College, Columbia University, and the Northwest Regional Educational Laboratory in behalf of a Consortium of institutions and agencies within the Northwest region of the United States.

The Development of the ComField Model

In reaction to the USOE's request for proposals to develop a model program, representatives of educational institutions and agencies in the Pacific Northwest were assembled by the Northwest Regional Educational Laboratory to discuss the feasibility of responding to the request jointly. After considerable discussion it was agreed that a proposal should be prepared by and submitted in the name of a consortium of institutions and agencies in the Northwest, and that representatives from these institutions and agencies should collectively develop specifications for the model program. The consortium consisted of representatives from 26 colleges and universities in the Pacific Northwest; 5 state departments of education (Oregon, Idaho, Montana, Washington, Alaska); Teaching Research, a Division of the Oregon State System of Higher Education; and the Northwest Regional Educational Laboratory. The rationale underlying the decision to move as a consortium was twofold: a) the recognition that the development of a teacher education program of the kind anticipated was a task of sufficient magnitude and complexity as to require resources beyond those available to any one institution, and b) the experience of several members of the consortium in experimenting with the kind of program that was generally desired.

The defining characteristics of the program desired by members of the consortium were:

- 1) that the demonstration of competence in the performance of specified teaching tasks be the basis for certification;
- 2) that colleges and public schools be full partners in the development and execution of the program;
- 3) that the program be individually adaptable or "personalized" to those going through it, and
- 4) that it be continuously open to modification on the basis of cost/effectiveness and cost/benefits data.

More importantly, the model was to reflect a process. Generally speaking, the application of systems design principles to the development and operation of a model based teacher education program meant that each of the functional parts within the program, as well as the program as a whole, was to assume three characteristics: a) it was to be designed to bring about a specified and measurable outcome;

b) it was to be designed so that evidence as to the effectiveness with which it brought about its intended outcome was continuously available; and c) it was to be designed so that adaptive or corrective modifications could be made in the program in light of that evidence. In short, it represented a process that required its user to know what it was that he wanted to accomplish, order events in such a way that he had some probability of accomplishing it, assess whether the specified events did in fact accomplish that which they were intended to accomplish, and if they did not, modify them until they did.

For shorthand purposes, the model developed by the Consortium came to be called the ComField Model, a contraction for competency based and field centered.

Five products emerged from the work of the Consortium: a) a conceptual framework for the model, b) general model specifications, c) specifications for the application of the model to specific teacher education programs, d) statements of rationale in support of both sets of specifications, and e) exemplars illustrating how various elements within an operational teacher education program might look if they were designed according to the specifications. By and large, these products differed from those that derived from the work of the other model builders, for with one or two exceptions the "models" that others produced were in fact designs for operational programs. By contrast, and in keeping with the literal interpretation of the term model, the planners of ComField interpreted their charge as one of developing specifications for a general purpose model that could be used as a guide in the development of a wide range of operational teacher education programs. In this sense, the ComField model is only broadly prescriptive. Within the constraints of the conceptual framework and broad specifications provided, it leaves the definition of particular programs to those who must develop and operate them.

The specifications that derived from the Phase I ComField effort, their rationale, and exemplars of an operational program derived therefrom are summarized in three volumes edited by Schalock and Hale.¹

¹ Schalock, H. D. and Hale, J. R. (Eds.). A Competency Based, Field Centered, Systems Approach to Elementary Teacher Education. Vols. I, II and III. Final Report for Project No. 89022, Bureau of Research, Office of Education, U.S. Department of Health, Education and Welfare, 1968.

Testing the Feasibility of Implementing a ComField Based Elementary Teacher Education Program

Following receipt of the nine models developed in Phase I of the project, the Bureau of Research circulated a request for proposals to translate the general models into prototype operational programs, design a plan for their implementation over a five year period of time, and obtain estimates of the cost that would be involved in carrying out that plan. The Phase II effort was to be, in effect, a feasibility study for the development, implementation and operation of a teacher preparation program based on the specifications designed by one or more of the groups engaged in Phase I.

At this juncture a new constraint was placed upon those preparing proposals, namely, that proposals would be accepted only from teacher education institutions that graduated more than 100 elementary teachers per year. This stipulation ruled out the possibility of a second proposal by the NWREL as the agency representing the regional Consortium. This forced a decision to either identify a pilot or lead institution in the region to carry the major responsibility for program development, or to abandon the regional idea at the level of feasibility testing and program implementation. Three factors led to the decision to move away from a regional base of operation when applying for Phase II funds:

- 1) several institutions had the qualifications to serve as the pilot or lead institution for the region and the selection of one would have proved to be difficult;
- 2) when the focus of effort moves from model building to program planning and operation the institution responsible for implementing the program, and the state within which the institution resides, must have greater control over decision-making relative to the program than can be afforded through a regional structure; and
- 3) the likelihood of support for long term program development and operation is increased when the primary unit of operation is one that has well established communication networks, functionally interdependent agencies and institutions, established mechanisms of finance and government, etc.

Given such constraints, the decision was made to carry out feasibility testing and program implementation at a state rather than a regional level. The strong ties established throughout the region in the Phase I effort remained, however, and provided a basis for establishing a regional information network that was to carry the products that derived from the Phase II effort should an institution within the region be granted funds to carry it out.

Following the decision to seek funds to support feasibility testing at a state rather than a regional level, representatives of each institution within the Oregon State System of Higher Education that prepare elementary teachers, and Marylhurst College, a private liberal arts college near Portland with a strong elementary teacher education program, met to identify the institution that was to serve as the pilot institution for the state. Oregon College of Education was identified as that institution, and in cooperation with representatives from each of the institutions within the Oregon Consortium and the Teaching Research Division of the Oregon State System of Higher Education, prepared a proposal that requested funds to carry out a Phase II study. The proposal was subsequently granted and Oregon College of Education became the pilot institution to test the feasibility of implementing a ComField based elementary teacher education program on a state-wide basis. Institutions comprising the Oregon Consortium, and their locations, are listed in Figure 1.

Eight institutions across the nation received funding in support of feasibility studies: Florida State University, Michigan State University, Syracuse University, Toledo University, the University of Georgia, the University of Massachusetts, the University of Wisconsin and Oregon College of Education.

The Objectives of the Feasibility Study in Oregon

As originally submitted the Phase II proposal from Oregon College of Education (hereafter referred to as OCE) contained eight objectives, four of which were to be carried out at OCE, two within the state generally and two within the region.

THOSE TO BE CARRIED OUT AT OREGON COLLEGE OF EDUCATION

1. Develop projections as to the nature of early childhood and elementary education in the 1970's (as a basis for the design of an elementary teacher education program for the 70's).
2. Design an operational teacher education program on the basis of the projections developed in (1), and the specifications laid down by the ComField model.
3. Establish plans for managing the implementation of the program thus designed.
4. Determine cost estimates on the basis of the plans established for program implementation.

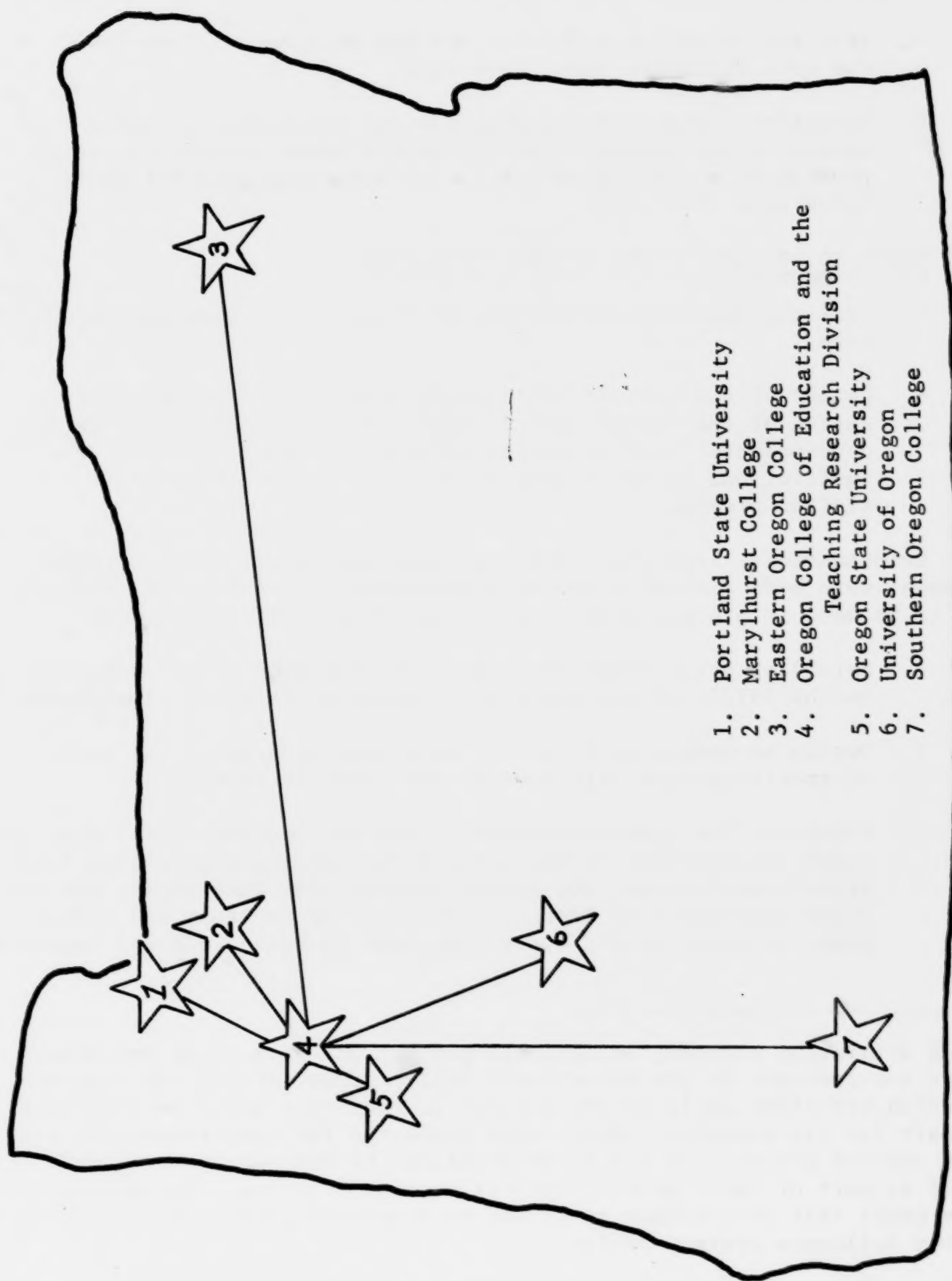


Figure 1. The Geographical Distribution of those Institutions which comprise the Oregon Consortium

THOSE TO BE CARRIED OUT WITHIN THE STATE

5. Test the generalizability of the OCE management plans and the cost estimates based upon them.
6. Establish a plan for coordinating the development, implementation and operation of a ComField based teacher education program on a state-wide basis, and determine cost estimates based upon that plan.

THOSE TO BE CARRIED OUT WITHIN THE REGION

7. Test the generalizability of the Oregon state-wide management plan.
8. Establish and test an information network in the Northwest Region of the United States, Hawaii and Guam that would permit developmental work in Oregon to be disseminated directly to institutions in the region interested in implementing a similar program.

Unfortunately, less than half the funds requested in the original proposal were made available and as a consequence considerable revision had to be made in project objectives. The revised objectives were:

1. Establish projections for pre-school and elementary education in the 1970's on the basis of a review of existing literature;
2. Design an operational teacher education program on the basis of specifications laid down by the ComField model;¹
3. Establish the appropriateness of the OCE implementation plan for other institutions in the state by having representatives from those institutions, the public schools that they serve, and the State Department of Education serve on an advisory and review panel relative to OCE activities, and by having OCE and Teaching

1

As originally planned, educational projections were to be developed under sub-contract by the Educational Policy Center within the Stanford Research Institute early in the project so that they would be available as a basis for all planning. When funds requested for the feasibility study were reduced projections had to be developed by OCE and Teaching Research staff as part of their general project responsibilities. Operationally this meant that projections could not be completed in time to significantly influence program design.

Research staff reflect the products of the OCE effort against the entire staffs of the cooperating colleges and schools;

4. Establish cost estimates for carrying out the OCE implementation plans;
5. Establish preliminary plans for implementing a ComField based elementary teacher education program on an integrated, state-wide basis; and
6. Transmit the products that derive from all of the above to the Northwest Regional Educational Laboratory for dissemination to all educational institutions in the region that prepare elementary teachers.

Procedures Employed In The Oregon Feasibility Study

By and large, the procedures followed in the project corresponded closely to the objectives being pursued. Moreover, they came into play in a relatively fixed sequence:

1. model specifications were translated into specifications for an operational program at OCE;
2. the program thus proposed was assessed for its acceptability by representatives of all of the constituent groups involved in the program (representatives of the OCE Coalition), and by representatives of the institutions comprising the Oregon Consortium;
3. a five-year plan for implementing the proposed program was developed and verified by members of the OCE Coalition;
4. an estimate was made of the resources needed to implement the program according to the five-year plan; and
5. dollar values were assigned to the resource estimates.

Educational projections and the plan for implementing the proposed program on a state-wide basis were developed throughout the course of the project. The procedures followed in carrying out these various tasks are summarized below.

<u>Task</u>	<u>Procedure</u>
1. Translation of model specifications into program specifications	A cyclical process of stating, reviewing, and revising by a task force comprised of representatives from the OCE

- elementary education program, the OCE administration, staff and administration from the public schools, faculty from the Teaching Research Division and students enrolled in the elementary education program at OCE
2. Determining program acceptability

Continuous review of the proposed program by representatives of each of the institutions within the Oregon Consortium, review by each of the constituent groups within the OCE Coalition, and a follow-on review by representatives from all constituencies within the OCE Coalition within the context of a composite coalition planning exercise
 3. Developing and verifying the five-year plan for implementation at OCE

A cyclical process of stating, reviewing, and revising by a subset of the task force that translated the model into the proposed OCE program; verification by representatives from all constituencies within the OCE Coalition within the context of a second coalition planning exercise
 4. Resource estimates for implementation

A cyclical process of stating, reviewing, and revising by a subset of the task force that translated the model into the proposed OCE program, representatives of the management consulting firm of Cresap, McCormick & Paget, and by representatives of Litton Educational Publishing, Inc.
 5. Assignment of dollar values to resource estimates

A rule generating and computational process carried out by representatives of the management consultant firm of Cresap, McCormick & Paget, and verified by a subset of the initial planning task force

- | | |
|---|---|
| 6. Educational projections for the nation | A literature review and compilation process by staff members from OCE |
| 7. Educational projections for Oregon | A field survey by staff members from Teaching Research |
| 8. Planning for state-wide implementation | A cyclical process of stating, reviewing, and revising by staff members from OCE and Teaching Research, representatives from the colleges and school districts that comprise the Oregon Consortium, the Vice-Chancellor for Academic Affairs of the Oregon State System of Higher Education, and representatives from the State Department of Education |

Products That Have Derived from the Oregon Feasibility Study

Five major products have evolved from the project:

1. A fairly detailed description of a ComField based elementary teacher education program;
2. A plan by which to implement that program;
3. An estimate of the resources needed to carry out the plan of implementation;
4. A preliminary plan for implementing a ComField based elementary teacher education program on a state-wide basis; and
5. Educational projections for the state and nation as a whole.

In addition, a critique has been made of the national projections in light of a study just completed on the projected use of media in education; the literature has been reviewed on the historical use of educational projections, educational coalitions, and collective bargaining within the context of education; and some preliminary thinking has been made explicit on maximizing the impact of a demonstration program on the educational community regionally and nationally. The national projections appear as Appendix A; their critique as Appendix B; the Oregon projections as Appendix C; the history of educational objectives commissions as Appendix D; and the history of educational coalitions as Appendix E. Notes on maximizing the impact of a demonstration program on a regional and national level appear as Section VIII in Volume I of the report.

Plans for Implementing a ComField Based Elementary Teacher Education Program in Oregon

As the U. S. Office of Education models program now stands, it is planned that two to four model based programs will be funded for demonstration purposes. On the basis of preliminary estimates, full implementation of each program would require funding of one to two million dollars each year for a period of four to seven years. Cost projections deriving from the feasibility studies suggest somewhat higher figures. While plans for the implementation effort have not as yet been confirmed by USOE personnel, nor have the funds needed for its support been committed, there is no reason to believe that the basic plan will be changed. If not, by late spring of 1970 the implementation process will begin. The State of Oregon, with OCE as the pilot institution, hopes to be one of the federally supported demonstration programs. If it is not, it will still attempt to implement the program that has been proposed. In the collective judgment of those in the state who have worked on the ComField model, it represents the direction in which teacher education generally, and elementary teacher education specifically, should move.

In attempting to assess the long range impact of the USOE models program on teacher education in the nation, it is probably this latter point of view that will have to be weighed, balanced or in some way accounted for. If Phase III of the models program is carried out, it will surely represent one of the most systematically planned efforts to improve teacher education that has ever taken place in the United States, one of the most expensive, and one of the few federally sponsored programs in education that is likely to have a major impact upon the population for which it is intended. If for some reason the Phase III effort does not become a reality, or is drastically reduced in scope, it is still likely that the long range impact of the program will be equivalent to or perhaps greater than any other single effort to improve elementary teacher education thus far undertaken in the nation. The opportunity to systematically plan such a program, and then to systematically test the feasibility of implementing that which has been planned, is a rare experience within the education profession. It is hard to imagine that the profession will not be the better for it.

H.D.S.
B.Y.K.
L.L.H.

Acknowledgements

A project which attempts to design an elementary teacher education program that requires full partnership between colleges, schools, students and educational research and development agencies, and which is being viewed as a pilot program for elementary teacher education within an entire state, has to involve a wide range of people in the design process. While there is no way to acknowledge all who have been a part of that process, the contribution of some has been such that it must be identified. Our deepest appreciation is expressed to those whose names are listed on the pages which follow.

In addition to those who constituted the various working groups within the project, we would like to extend special recognition to Mr. Robert Cole, Mr. Jerry Corrigan, Mr. David Morrisroe and Mr. Joe Inman from the management consultant firm of Cresap, McCormick and Paget, Inc. and Mr. Emmert Bates of Litton Educational Publishing, Inc. for their assistance in the generation of cost estimates for the proposed program. Their sensitivity to the issue involved in the project, and their competence in performing the tasks for which they were responsible, has provided a firm foundation for the kind of working relationships that will have to exist between the public and private sectors if a program of the kind envisioned is to be successful.

Finally, we would like to both acknowledge and express our gratitude to Dr. Norman Koch for his general editorial assistance and the assistance he gave Dr. Clifford Corley in the preparation of the educational projections at the national level; to the Administrative Council at Oregon College of Education for their help in planning strategy for the project and in responding to it within the context of the coalition planning exercises; to members of the Junior Block staff within the elementary teacher education program at the college who volunteered to carry much of the instructional and supervision load during the fall term for colleagues who were working on the project without benefit of funds to cover released time to do so; and finally, to the central administration of the college for their support throughout the entire effort. Without the energy, the commitment and the combined resources of such a wide range of people above and beyond that for which they were initially responsible the project never could have been completed.

H.D.S.
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PART I

A SYNOPSIS OF THE OREGON ADAPTATION OF A COMFIELD BASED
ELEMENTARY TEACHER EDUCATION PROGRAM
AND JUDGMENTS AS TO THE FEASIBILITY
OF ITS IMPLEMENTATION

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CHAPTER 1

A SYNOPSIS OF THE PROGRAM THAT HAS BEEN PROPOSED BY THE OCE COALITION

H. Del Schalock
Teaching Research

The proposed program can be described under four headings: the characteristics which broadly define the program; the structure of the program; its content; and its operation. In the present chapter a summary description is provided for each. An assessment of the ComField model in light of experience gained with it in the feasibility study is also provided. Parts III and IV of the report contain detailed descriptions of the program.

Defining Characteristics of the Program

Four terms broadly characterize the program that has been proposed by the OCE coalition: it is competency based, field-centered, personalized, and systematically designed and operated. These terms carry the following definitions:

Competency Based: the requirement that prospective teachers be able to demonstrate prior to certification that they can perform, in a variety of contexts, the functions for which they will be held responsible as teachers;

Field Centered: the requirement that the institutions and agencies responsible for the education of elementary school children, and representatives from the communities they serve, join as full partners in the design, development and operation of the program;

Personalized: the requirement that each student's program be planned and pursued in concert with his particular interests, objectives, learning rate and learning style;

Systematically Designed and Operated: the requirement that each of the parts within the program, as well as the program as a whole, be designed so as to bring about specified outcomes, have empirically based evidence as to the efficiency and effectiveness with which those outcomes are achieved, and be adaptable on the basis of that evidence.

By and large these definitions are consistent with the specifications provided by the ComField model, though in the case of personalization and linkage to the field there has been considerable elaboration by

the Coalition and members of the Oregon Consortium.

The OCE Definition of a Competency Based Program

As used in the ComField model the "performance of teaching functions" means the realization of school objectives. In this sense, the operational definition of a competency is the demonstration of the ability to bring about a major objective of a school.

Competencies that prospective teachers are expected to be able to perform prior to certification are of two kinds: instructional management competencies and instructional support competencies. Operationally, instructional management competencies are defined as the ability to bring about desired learning outcomes in children and instructional support competencies as the ability to bring about changes in the school context that are supportive of instruction. Examples of instructional management competencies include getting a child or group of children to be able to read at a given level of proficiency, work constructively in small groups, communicate with precision and clarity in written form, or develop a sensitivity to the feelings of others. Examples of instructional support competencies include the development of broad curriculum plans, the design and development of effective instructional materials, the preparation and administration of tests, and the interpretation of school policy or student performance to parents. While the specific set of instructional management and support competencies to be developed within the program are yet to be specified, program planning is based upon the assumption that students will demonstrate 14 to 16 such competencies for certification.¹

¹ One of the complicating factors in defining teaching competency in terms of the realization of educational objectives is the problem of deciding upon the level of generality to use in definition. In the matter of reading, for example, competence can be defined as getting a child or group of children to differentiate between the letters k, b and d, or to "enjoy" reading, or to develop reading skill at a specified level of proficiency. All are defined in terms of pupil outcomes, and thus all meet the ComField definitional requirement of an instructional management competency. Also, all are essential to the overall goal of "getting children to be able to read." So, which is to be labeled a "competency"?

For purposes of criterion assessment the OCE coalition has chosen to define as a competence the performance of relatively general school objectives, for example, getting children with given characteristics to read at given levels of proficiency. By adopting such a strategy "competencies" of lesser generality are treated as subsets of a criterion competence, and are thought of as being prerequisite to or enabling of a criterion competency. While the lesser competencies are to be mastered in the course of the program their mastery has significance primarily for guidance purposes rather than criterion assessment or certification.

A number of interrelated consequences follow from the definition of competency as the ability to bring about school objectives. One set pertain to the assessment of competence.

1. Competence has to be assessed in terms of the products that derive from a teacher's behavior rather than his behavior per se, or the knowledge or attitudes assumed to underlie his behavior. Operationally this means that the assessment of instructional management competencies requires evidence that a pupil or set of pupils can in fact read or are in fact more considerate of the feelings of others, and that the assessment of instructional support competencies requires evidence that curriculum or materials development efforts have in fact been productive or that parents do in fact understand a school's policy regarding the reporting of pupil performance.

While such an approach to assessment would appear to deny the significance of what a teacher knows or does that is not its intent. To be able to perform competently a teacher obviously must have a wide repertoire of knowledge, skills and sensitivities, but within the framework of a ComField based program these are viewed from a professional point of view as a means to an end and not as an end in themselves. In the proposed program there must be evidence that that which is known and that which can be done can be brought to bear in such a way that the objectives of a school are realized. Any less and there can be no claim to evidence that a prospective teacher can in fact demonstrate the tasks for which he will be held responsible as a teacher.

The commitment to such a point of view places severe demands upon those responsible for program development and operation but they are demands that are necessary if the major assumption on which the program rests is to be met with candor. It is a necessary assumption also if education and teacher education are ever to move away from the point of view that the performance of certain classes of activity on the part of teachers - for example, asking questions, administering tests, giving information through exposition, and guiding reading in a workbook - are sufficient in and of themselves to bring about learning in children.

2. By being forced to look at the products of a teachers behavior when assessing competency, a competency is always situation specific. Competence is getting a 6 year-old child in a class of ten who is bright but visually handicapped to be able to discriminate between all letters of the alphabet, or in getting a 13 year-old boy of average ability in a class of thirty, with little exposure to cultures other than that

reflected in his own relatively isolated mountain community, to place value in cultures other than his own. As used in the proposed program competence cannot be thought of in an abstract or generic sense; competence in instruction must always be thought of in terms of the ability to bring about a specific outcome for a specific child or set of children who have specific characteristics and who are operating in a specific instructional setting.

3. By being situation specific competence must always be demonstrated in a real-life setting. Real pupils working toward real objectives must be available to students in order to demonstrate instructional management competencies. Real parents or real curriculum development projects must be available in order to demonstrate instructional support competencies.
4. By having to demonstrate competence in ongoing educational settings procedures must be established that permit the college and schools to be reasonably confident that a prospective teacher will be able to perform the functions expected of him in a cooperating school before he enters it. This has led to the requirement in the proposed program that teaching competencies be demonstrated to criterion under laboratory or simplified conditions prior to the assumption of supervised responsibility for the learning of children in a school. The assumption underlying such a requirement is straight forward: laboratory or simulated conditions permit the demonstration of competence under circumstances where the complexity of the teaching-learning situation can be controlled and the possibility of negative consequences for children reduced. Once the competence of a prospective teacher has been demonstrated under simplified conditions it is reasonable to assume that he will be able to enter live classroom situations, with supervision, and perform reasonably well.
5. To insure that a prospective teacher is broadly competent he must demonstrate each competency in a variety of educational settings. Since the number of settings within which a competency can be demonstrated are essentially without end the strategy of assessment requires that each competency be demonstrated in situations which appropriately sample classes of outcomes for classes of target populations within classes of educational settings. A basic assumption underlying the program is that each prospective teacher will be able to negotiate the specific situations in which he is to demonstrate competence, and that these will reflect the type of situations for which he is preparing to teach. More will be said about negotiation later.

The definition of competency as the ability to bring about school objectives also has far reaching implications for program design and curriculum development.

1. The program must take as its point of departure and keep as its point of focus the objectives of elementary schools. To meet this requirement the program proposed at OCE calls for the establishment of an Instructional Objectives Mechanism that has representation from all of the groups that constitute the OCE coalition. Functionally it is responsible for specifying the pupil outcomes that are to derive from elementary schools,¹ the non-instructional tasks to be performed by teachers in elementary schools and the personal characteristics expected of prospective teachers graduating from OCE. In its operation the mechanism requires that all recommendations for such competencies be referenced against a) what is known about human development and behavior, b) what is known about the present social and cultural context, and c) what is known about the nature of alternative futures. The basic assumption underlying the operation of the mechanism is that by frankly facing the task of specifying the outcomes expected from the schools, by doing so with broad representation of those who have the greatest investment in the realization of those outcomes, and by reflecting the deliberations of such a group against that which is known in the social, behavioral and biological sciences, the best possible set of educational objectives will be derived and they will have the best possible chance of being accepted by those who will be affected by them. While any such list of outcomes will be subject to continuous change, both as a consequence of changing demands of the social system and changing knowledge of human development and behavior, it represents a place to begin. Without such a beginning a ComField based teacher education program cannot function.

The structure and operation of the Objectives Mechanism that has been proposed by the OCE coalition is described in

¹ In line with current thinking both "process" and "product" outcomes will be specified. Examples of process outcomes include a pupil's being able to identify his own needs and commitments, being able to select an appropriate course of action to satisfy them, being able to evaluate progress towards their realization, and being able to negotiate these matters with significant others. Examples of content outcomes include those from the personal domain, e.g., self identity and freedom from crippling emotions; from the social domain, e.g., trust, consideration for the feelings of others and the capacity to love; and from the commonly recognized "affective", "cognitive" and "psychomotor" domains (for a preliminary taxonomy of content outcomes, see Appendix A in Volume II of the original ComField report).

detail in Chapter 9.

2. Given the commitment to prepare teachers who can bring about the objectives of elementary schools the curriculum development process must be linked to the objectives of the schools. In a ComField based program a four step process is followed: a) specify the objectives of the schools; b) identify the conditions that will bring such objectives about; c) specify the knowledge, skills and sensitivities that are needed by teachers to create such conditions; and d) specify the conditions by which such knowledge, skill and sensitivity can be developed. Once the latter has been specified it becomes possible to design the learning experiences that will lead to their development. These steps are summarized schematically in Figure 2.

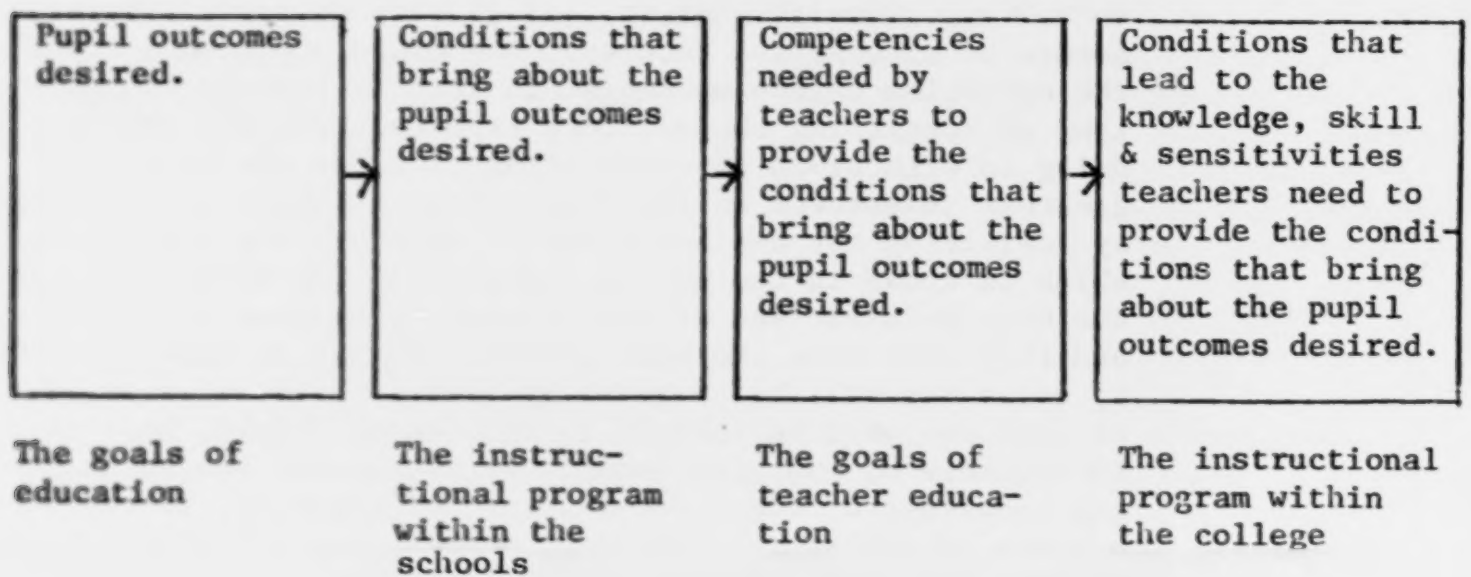


Figure 2. The model to be followed in the design of a teacher education curriculum that prepares teachers to bring about the learning outcomes desired in pupils.

The same process is followed in the design of curricula that lead to the development of instructional support competencies.

While the logic of such a process is clear, and will be followed in the program proposed at OCE, the information base that exists in the fields of education and psychology on which the design of such a program depends is extremely limited. With few exceptions there simply are no tested, empirically based "instructional principles" that speak to the conditions

or operations that give rise to specific classes of pupil outcomes for specific kinds of children within specific instructional settings. It is still not possible, for example, to identify explicitly and with confidence the instructional conditions which permit concepts to be mastered, attitudes to be modified or chronic anxiety to be reduced for different kinds of children in differing kinds of instructional settings. It is even less possible to specify the conditions for bringing about such outcomes as trust or considerateness or self-understanding. As a consequence it is not possible to go very far in specifying the knowledge and skills and sensitivities that prospective teachers need in order to bring about such conditions. The same lack of empirically tested instructional principles exists at the level of teacher education: there still is relatively little knowledge that speaks specifically to bringing about the mastery of the knowledge, skills, and sensitivities needed by teachers in order to establish the conditions required to bring about the outcomes for which they will be responsible in the educational setting. As a consequence of such a limited knowledge base the design of the proposed program must of necessity depend as much on the collective wisdom of those who are helping shape it as on empirical evidence.

3. Given the requirement that students be able to bring about selected objectives of a school in order to be certified there must be evidence that learning experiences within the program prepare them to do so. To insure that this is the case the ComField model specifies that instruction should make use of what has come to be known as "instructional systems".

As used in the present context an instructional system is an empirically developed set of learning experiences designed to bring about a given outcome for a given set of prospective teachers with a given degree of reliability. The design of an instructional system involves the systematic analysis of that which is to be learned, a systematic structuring of it from the learner's point of view, and the specification of a set of learning experiences which have a high probability of leading the user of the system to a mastery of that which is to be learned. Within the context of instructional systems design learning experiences may include lectures, small group discussions, reading, observation of films or real life settings, laboratory simulation, micro-teaching experiences, etc. - so long as they are organized around the development of explicit performance outcomes that relate to explicit tasks that the prospective teacher is likely to have to perform. Whatever the learning experiences they are always designed with multiple entry points and multiple paths to pursue, thus

permitting students to enter at levels commensurate with background and progress through them at a speed and in ways commensurate with learning style.

The OCE Definition of a Field Centered Program

By specifying that a teacher education program shall be competency based, and by specifying that competency shall be demonstrated under both simplified and real life conditions, a number of questions immediately come to mind. Who, for example, is to determine the pupil outcomes for which teachers are to be responsible? Who is to determine the criteria for judging whether or not a prospective teacher has achieved those outcomes? What educational settings are to be used for the demonstration of competence? How is one to know whether the competencies that have been identified are in fact the ones most critically needed by teachers in a given setting at a given point in time? Who is to determine when a prospective teacher is ready to proceed within the program and how will this determination be made? Who is to determine when a teacher is ready to leave the program and enter the profession as a fully certified teacher?

By being field centered it is hopeful that the OCE program will be able to arrive at defensible answers to such questions.

In operational terms field centered, as used in the ComField model, refers to the involvement of a coalition of educational institutions and agencies in the operation of a particular teacher education program. Within the context of the coalition there is participation in decision making and the assumption of responsibility for program operation that is consistent with interests and potential for contribution, that is, some within the coalition will engage in the identification of program objectives, some in the development of curriculum and materials, some in criterion assessment, etc. The central OCE Coalition includes all departments within the college, students enrolled in elementary teacher education, seven local school districts, Teaching Research, the Oregon State Department of Education and the Chancellor's Office of the Oregon State System of Higher Education. The overall OCE Coalition includes, in addition, a management consultant firm (Cresap, McCormick and Paget Inc.) a representatives of the educational materials production industry (Litton Educational Publishing, Inc.) a regional laboratory (the Northwest Regional Educational Laboratory), the various professional education associations within the state, and the citizens within each of the school districts that are a part of the coalition. The overall coalition is illustrated schematically in Figure 3.1 While the specific mechanisms to be used in enabling the Coalition to function are yet to be activated they have been designed (see Part IV

¹ The OCE Coalition rests within a state-wide consortium of such coalitions. As discussed in the Preface and Chapter 2 the consortium includes coalitions established around Eastern Oregon College, Southern Oregon College, Marylhurst College, Portland State University, Oregon State University, and the University of Oregon.

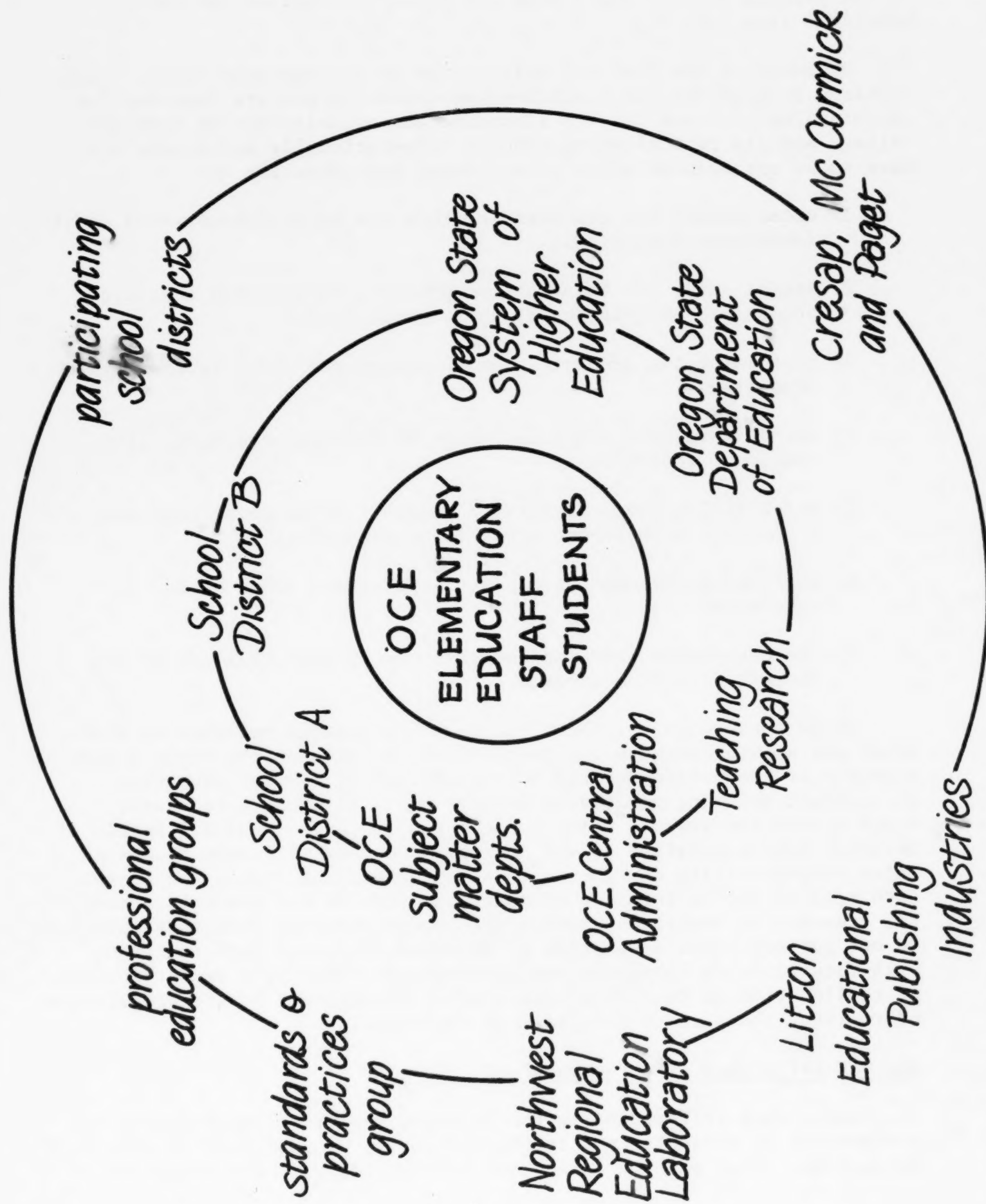


Figure 3. A schematic representation of the OCE Elementary Teacher Education Coalition

of the present report) and a plan for their interaction has been specified (see Part V).

By adopting the ComField definitions of a competency based, field centered program the OCE Coalition has assumed a posture that has far reaching implications for the structure and organization of both the college and its participating schools. Operationally mechanisms will have to be established which permit equal participation in:

- 1) establishing the competencies that are to be demonstrated under laboratory conditions;
- 2) establishing the behaviors or products of behavior that are acceptable as evidence of those competencies;
- 3) confirming the demonstration of competence under laboratory conditions;
- 4) establishing the competencies to be demonstrated under live classroom conditions;
- 5) establishing the behaviors or products of behavior that are acceptable as evidence of those competencies;
- 6) confirming the demonstration of competence under field conditions; and
- 7) the development and implementation of policy relating to the teacher education program.

While these will represent far reaching changes relative to that which now exists, perhaps the greatest change lies in the overall relationship of the public schools to the process of teacher education. In contrast to being relatively passive hosts to student teachers, staff within the schools will become actively involved at all levels of decision making relative to the program, and they will have to assume major responsibility for instruction and assessment within the program. Both require the performance of functions that do not now exist, and the creation of staffs who have a set of competencies that they currently do not possess. The assumption of responsibility for such functions will require major change in the operation of schools, a redistribution or reallocation of resources, and a major involvement in the preparation of resident teachers to perform such functions.

The OCE Definition of a Personalized Program

Individual differences in the learning patterns, capabilities and preferences of students in a teacher education program must be more than recognized. They must be taken into account fully in the design of

such programs. At the time the ComField model was first described concern for individual differences focused primarily upon students having options in the learning experiences available, learning experiences being under control of the student, opportunity to develop an idiosyncratic teaching style, etc. Further work with the model suggested, however, that the personalization of a teacher education program requires a number of additional elements. These include an opportunity for students, within established limits, to:

- 1) contribute meaningfully to the design and development of the program;
- 2) negotiate that which they wish to take from the program;
- 3) negotiate the settings within which the competencies negotiated in (2) are to be demonstrated;
- 4) negotiate the criteria by which judgment is to be made about competence; and
- 5) continuously assess the relevance of the objectives that have been negotiated, and the relevance of the educational experiences being pursued in relation to those objectives.

As such, the effort to personalize within the context of a ComField based teacher education program is concerned with how students make sense of or find relevance in an educational program in light of their individual characteristics and commitments. It is also concerned with the ever present tension between the individual and "the system"; between the past and the future; between what is and what ought to be.

How does the program proposed by the OCE Coalition attempt to deal with such issues? Generally speaking, by designing the program in such a way that there are a wide range of options available to those going through it and by providing the means to ensure that the options chosen represent the best possible fit for the individual choosing them.

Three vehicles are used in the program to facilitate wise and personally meaningful choice: sponsorship, clinical supervision and negotiation. As used by the OCE Coalition sponsorship refers to a continuing relationship between a college staff member and a student throughout the student's stay in the program. Sponsors and students are to be matched as closely as possible in terms of interests and personality characteristics, and are expected to come to know one another well. The aim of the sponsor-student relationship is to permit two people who assume quite different roles and responsibilities within the program to see one another as individuals - with needs and pressures and limited abilities - so that reasonable and meaningful negotiations can occur between them. To make knowing one another possible it is anticipated that a sponsor will be responsible for no more than 15 or 20 students.

The clinical supervisor is a school based person who assumes primary responsibility for instruction, assessment and the student's welfare while he is within the school setting. As such he works closely with the sponsor throughout the program and assumes many of the sponsor's functions. It is anticipated that a clinical supervisor will carry responsibility for 15 to 20 "clinical" students (students enrolled in the clinical studies phase of the program) or 5 or so "interns".¹

The vehicle designed to insure personalization is negotiation, and within the context of the program proposed by the OCE Coalition negotiation is to be translated literally. Operationally, negotiation means that those who come to a negotiation do so with a position to be negotiated. Negotiations will be carried on by a student and his sponsor, and by a student and his clinical supervisor, with that to be negotiated being nothing less than the total program in which he is to engage.

The sponsor-student relationship begins as soon as the student declares an interest in the teacher education program; the sponsor-student-clinical supervisor relationship begins as soon as a student enters the clinical studies phase of the program. The rationale underlying the sponsorship and negotiation strategy is straightforward: responsibility for program and professional standards must be insured, but not at the price of denying the individuality of students in the program. One way of accommodating both is to provide a mechanism which lets genuine negotiation occur between individuals representing both sets of concerns. Whenever genuine and fruitful negotiation cannot occur sponsorship must be changed. The request for change may come from either student or staff member.

As in any negotiating procedure provision must be made for arbitration when successful negotiation cannot be carried out. In the case of the OCE program this is provided by an arbitration board that consists of a student, a college faculty member and a staff member from the public schools. Given a functional student-sponsor relationship, and a set of ground rules that say that both student and sponsor understand that the outcome of any given negotiation is to be one that is acceptable to both parties, it is anticipated that the need for arbitration will be slight.

The various facets of the personalization process within the program are reviewed briefly in Appendix F and elaborated in Chapter 8.

¹ For a summary description of the structure of the program see pp 17 and 18.

The OCE Definition of a Systematically Designed and Operated Program

In line with the requirements of the ComField model each of the functional parts within the proposed program at OCE, as well as the program as a whole, has three characteristics:

- 1) it is designed to bring about a specified and measureable outcome;
- 2) it is designed so that evidence as to the effectiveness with which it brings about its intended outcome is continuously available; and
- 3) it is designed to be adaptive or corrective in light of that evidence.

This is the case whether the part in question is an instructional experience, the procedures developed to personalize instructional experiences, the instructional program as a whole, or any of the mechanisms needed to implement the program. As such the program represents a process or way of proceeding. It is "goal oriented", characterized by "systems design" principles, "corrective feedback loops", etc. In short, it is a process that requires the coalition to a) know what it is that it wants to accomplish, b) order events in such a way that there is some probability of accomplishing it, c) assess whether these events do in fact accomplish that which they are intended to accomplish, and d) if they do not, modify them until they do. This process is represented schematically in Figure 4.

Commitment to such a process has far reaching implications. On the one hand it has defined the way in which the ComField model has been developed, and the way in which the program proposed by the OCE Coalition has been derived from the model. It also defines the way in which any other group of institutions that wish to form a coalition and implement a ComField based teacher education program will have to function, or the way in which each component within such a program is to be given definition or made operational, or the process by which a student going through the program is to identify and develop the competencies that he desires to take from the program. On the other hand it defines the process by which the program as a whole must function. When translated into the instructional program generally, and applied over a period of time, it requires a series of steps of the kind summarized in Figure 5. When translated into terms that more closely approximate the actual operation of the instructional program it requires a series of steps of the kind summarized in Figure 6. These are harsh demands upon anyone attempting to implement a teacher education program and will obviously require a major reallocation of resources and the addition of a large number of faculty having new sets of competencies.

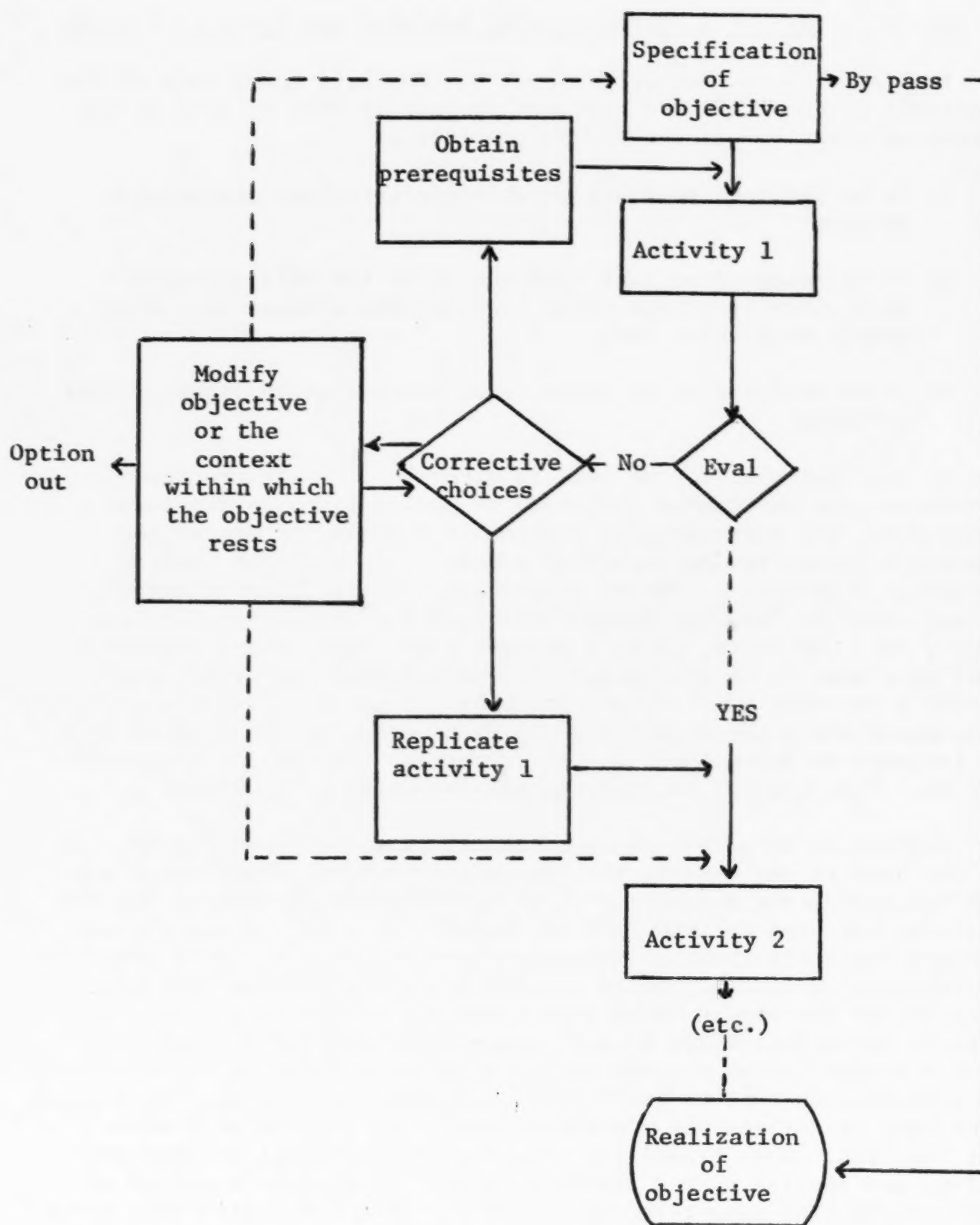


Figure 4. A schematic representation of the adaptive process reflected throughout a ComField based program.

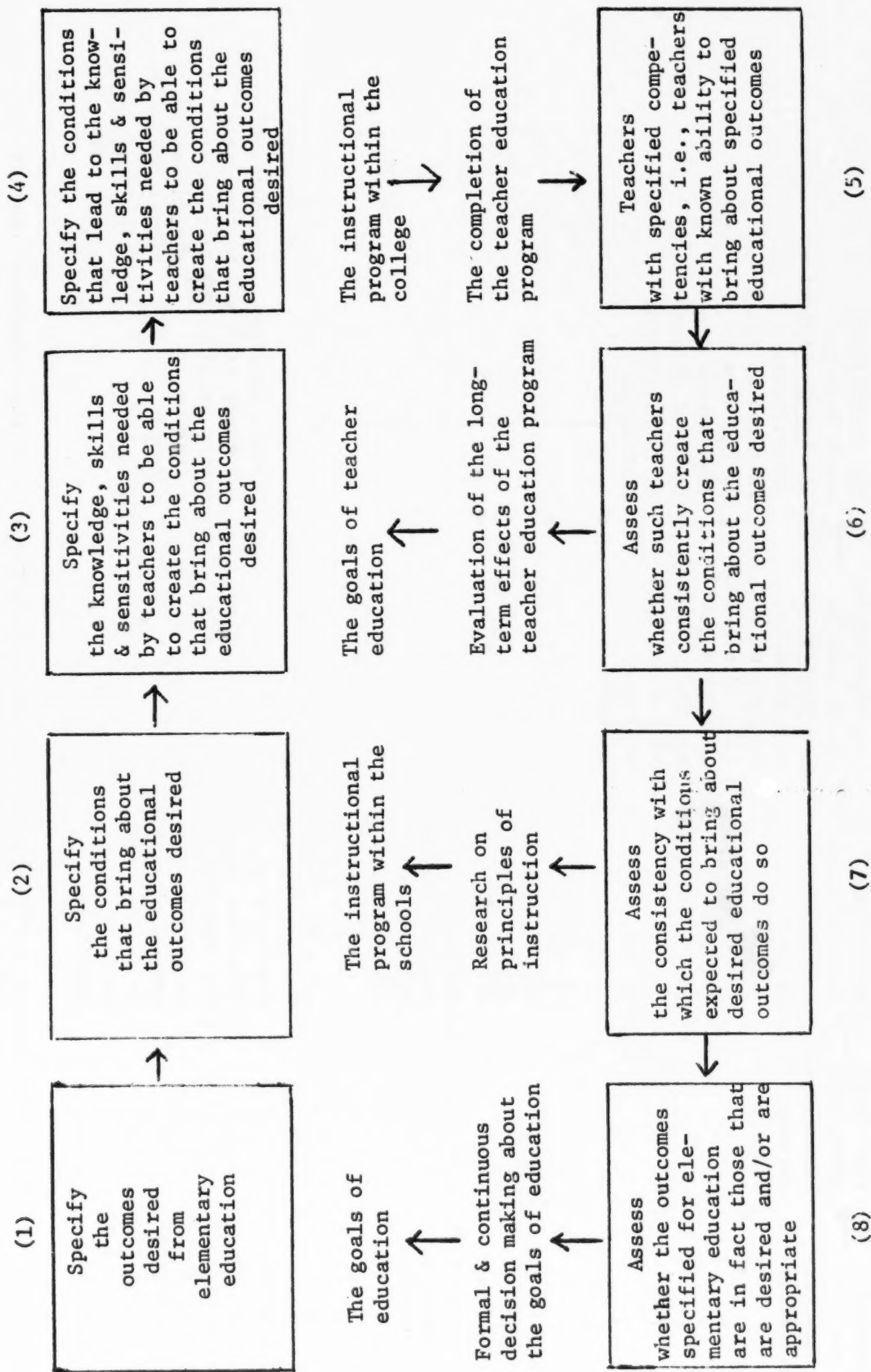


Figure 5. A schematic representation of the systems design process applied to the design, development and adaptation of the elementary teacher education program proposed by the OCE Coalition.

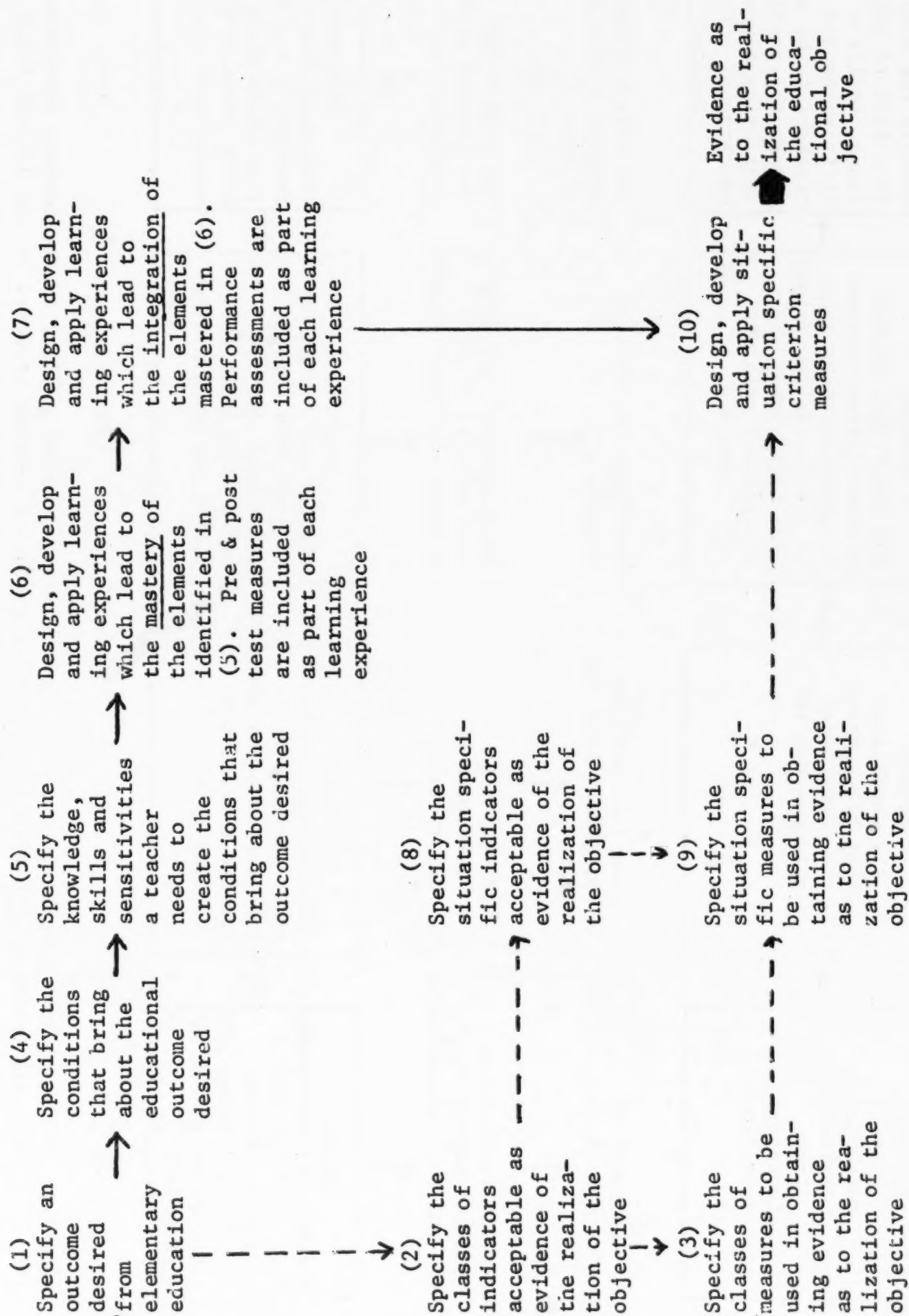


Figure 6. The model that guides the design, development and application of the elementary teacher education program proposed by the OCE Coalition.

While the incorporation of systems design procedures permits a ComField based program to realize its objectives with a known degree of reliability, continuously adapt to needed change, etc., its greatest power probably lies in its generalizability to the behavior patterns of prospective teachers. As students move through such a program they not only are made aware of the process by being continuously subjected to it in their own learning, but they are also required to reflect the process in their preliminary teaching. In order to move through the program they have to establish desired pupil outcomes, order events to bring them about, assess progress to see if desired outcomes are being reached, and, if they are not, modify events until they are. A major assumption within the model is that the continuous demonstration of this pattern of behavior by prospective teachers, coupled with their continuous exposure to it in their own educational experience, will lead to the ultimate goal of any teacher education program, namely, the development of generally adaptive, functionally competent, self-directed career teachers.

The Structure of the Program

The program involves three relatively distinct phases of work: the General Studies phase, the Clinical Studies phase, and the Intern phase. Operationally, the General Studies phase is defined as that aspect of the program that does not involve responsibility for the learning of children; the Clinical Studies phase as that aspect of the program that involves responsibility for the learning of children under simplified (laboratory or simulated) conditions; and the Intern phase as that aspect of the program that involves supervised responsibility for the learning of children in fully operational, real-life educational settings. As such the General Studies phase of the program corresponds most closely to that which has been labeled traditionally as the "personally enriching" or "liberalizing" or "general education" dimension of teacher education and the Clinical Studies phase corresponds most closely to that which has been traditionally labeled the "professional development" or "laboratory" dimension.

The Intern phase has no parallel in traditionally designed teacher education programs, and it in no way resembles the "intern" programs currently in vogue. As used in the program proposed by the OCE Coalition a prospective teacher enters the Intern phase only after he has demonstrated a specified set of competencies under laboratory conditions, and his task within the Intern phase is to demonstrate the same or a higher order set of competencies under real-life conditions. As an Intern a prospective teacher is to assume supervised responsibility for the full range of functions for which he will be responsible as a teacher, and he will be held accountable for the systematic demonstration of competence in the performance of those functions.

Two levels of certification are included in the pre-service program: INITIAL and CONTINUING.¹ These correspond, respectively, to the completion of the Clinical Studies and the Intern phases of the program. As used in the proposed program INITIAL certification designates a level of competency which permits the assumption of supervised responsibility for the learning of children (a teaching Intern), and CONTINUING certification designates a level of competency which permits the assumption of full responsibility for the learning of children. Certification criteria and processes are described in greater detail in Part III of the report.

As currently planned, no firm time lines are attached to program phases but in general, for students declaring an interest in teacher education upon entry as a Freshman, the General Studies phase will last for a year or two, the Clinical Studies phase a year or two and the Intern phase a year or two. Some students may extend or shorten these estimates, and students transferring from other colleges or students declaring an interest in teacher education after a year or more at OCE will undoubtedly move through the program on some other time schedule. On the average, however, most students will likely spend three to four years completing requirements for INITIAL certification and one to two years completing requirements for CONTINUING certification.

A schematic representation of program structure, the probable number of years required to move through the program, and the certification levels within it is presented in Figure 7. The broken lines in the figure represent relatively flexible entry-exit requirements; solid lines represent relatively inflexible entry-exit requirements.

The Content of the Program

From the point of view of the OCE Coalition two straw men exist today in programs that are designated to prepare elementary teachers.² The first is the notion that one set of learning experiences have to do with "personally enriching" or "liberally" or "generally" educating a student. The other is the notion that another set of learning experiences "prepare professionals", or "train for a life of service". When such a view exists within a college environment at best defensiveness, mistrust, and lack of productive interchange occurs. At worst

¹ A third level of certification, that of CONSULTANT, is also used in the program but it is reserved for persons in the field who have demonstrated the competencies needed to perform as Clinical Supervisors. As such, this is a level of certification that occurs outside of the pre-service program and is not dealt with in the present context. It is planned, however, that certification at the CONSULTANT level will be as stringent and systematic a process as it is at the pre-service level.

² Thanks go to Robert Albritton of the OCE education faculty for the distinctions which follow.

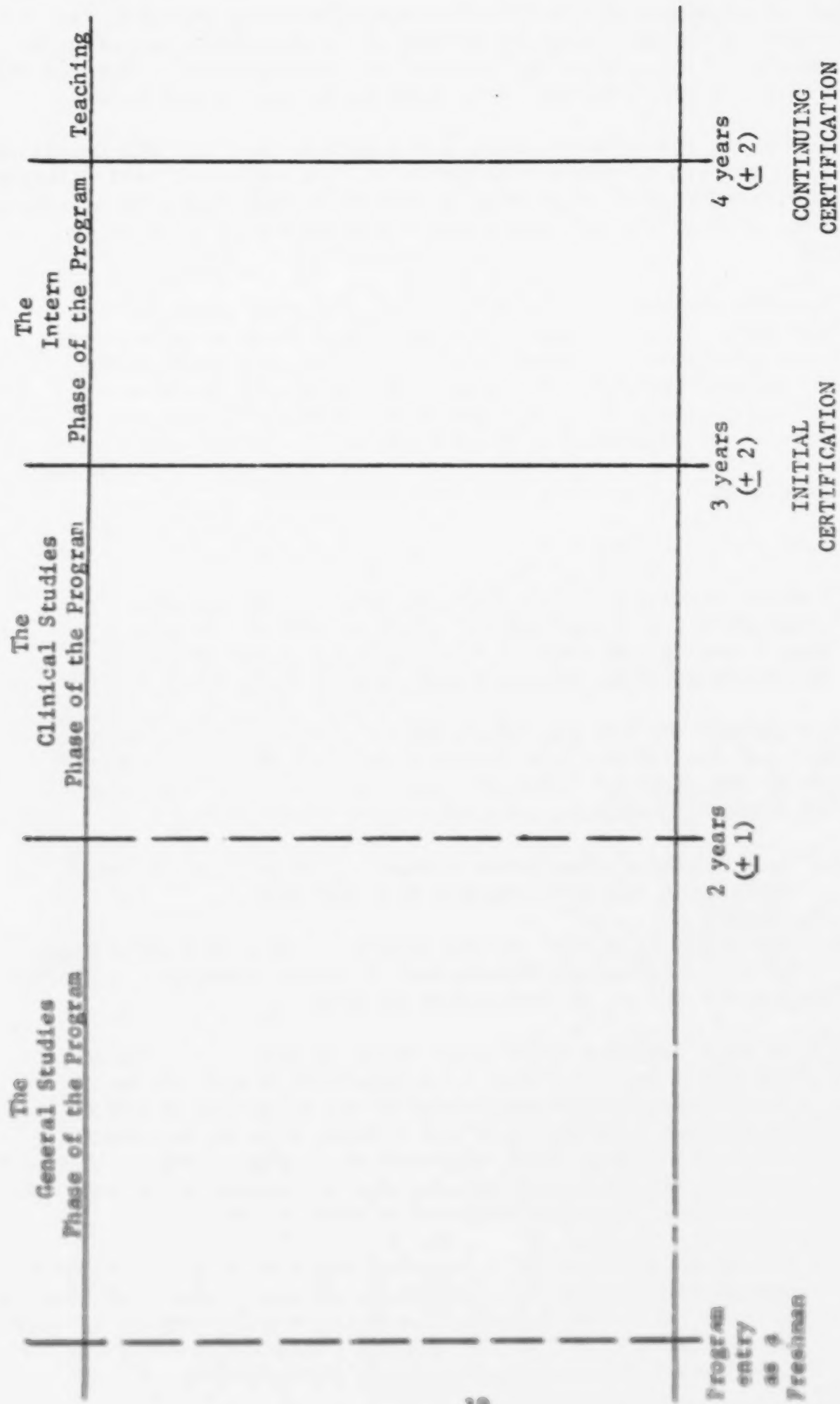


Figure 7. A schematic representation of the structure of the preservice elementary teacher education program proposed at OCE.

it leads to segments of a college faculty jealously guarding its domain against encroachments by others or to denigrate the efforts and products of the others as "unreal" or "unimportant". For the OCE Coalition these are straw men that have to be put to the torch.

As a basis for understanding the position that the OCE Coalition takes with respect to the relationship of "professional" and "liberal" education, responses of a student to two different learning experiences are cited. The first response occurs in reaction to a class in geology.

"He (the instructor) really knows a lot about geology."
"Now that I know about rock formations I want to go on and learn some more." "When I travel through different types of country I will now be able to appreciate it because..."
"He has everything so well organized that it's easy to learn about minerals." "I like the way he makes each class different because he has us do..." "I hope that I can teach as well as he does when I become a teacher."

The second response occurs in relation to a reading methods class.

"I never realized that I read all those different ways."
"Now I know why I read slower in this kind of material."
"When I get my own class I will begin to teach reading..."
"To encourage wide, recreational reading I am going to..."

Five points can be made about the student's response to these two experiences which reflect the position taken by the OCE Coalition in relation to the place of "liberal" and "professional" education in the lives of students preparing to teach.

1. Each learning experience always contributes to personal enrichment and professional development.
2. The emphasis placed on the element of personal enrichment or on professional development is often viewed by a student in one way and by an instructor in another.
3. In each learning experience there is always an element of cognition and reference to a cognitive standard, an element of affectivity and referenced to an affective standard, and an element of evaluation and reference to an evaluative standard. These three elements are always integrated by the student and reflected against the cognitive, affective and evaluative standards which he already holds.
4. A student responds to a learning experience as a complete person rather than as a composite of categories characterized by such labels as cognitive, affective and evaluative. Such categories are useful for analytic-descriptive purposes but they have little basis in reality beyond that.

5. The reality of any learning experience is intrinsic with the student, not the subject matter or the instructional strategies that carry it.

As a consequence of this point of view the OCE Coalition treats all learning experiences as both personally and professional enriching.

Having adopted such a view it needs to be pointed out that within the program there is still a differentiation of curriculum as it pertains to the preparation of students who are generally knowledgeable and professionally competent. While the differentiation is not as severe as it is in many programs there are learning experiences especially designed to bring about the general education objectives of the college and learning experiences especially designed to bring about professional objectives. Whatever their focus or intended function, however, all learning experiences within the program are to be designed ultimately in accordance with the requirements of a competency based, field centered, personalized and systematically designed and operated model of instruction. As such the content of the OCE elementary teacher education program can be illustrated as in Figure 8.¹

Within this broad framework four "dimensions of experience" or "curriculum threads" interface and interact, providing in combination the planned learning experiences encountered in the pre-service program. These include a FOUNDATIONS thread, a SELF-CONFRONTATION thread, a PROFESSIONAL ORIENTATION thread, and a PROFESSIONAL INTEGRATION thread. The latter is composed of both SYNTHESIZING AND CONSOLIDATING experiences.

The Foundations Thread

Foundations experiences support both the general and professional education goals of the program. As such they tend to carry one of two emphases: one that leads to the realization of the general education objectives of the program or one that leads to the realization of professional objectives. Depending on emphasis the content of the experiences, and to some extent the way in which they are encountered, differ.

By and large, at least in the early years of the program, foundations experiences are designed to meet general education objectives

¹ The point of view taken by the OCE Coalition in regard to general and professional education is not to be confused with the position of the ComField model. The model recognizes that each college has its own set of requirements relative to general education and that the professional education program must accommodate itself to such requirements. In some cases this will mean that a ComField based program will have to accommodate itself to a discipline major, in some cases an interdisciplinary major, or in some cases simply to a fixed number of hours in general education subjects.

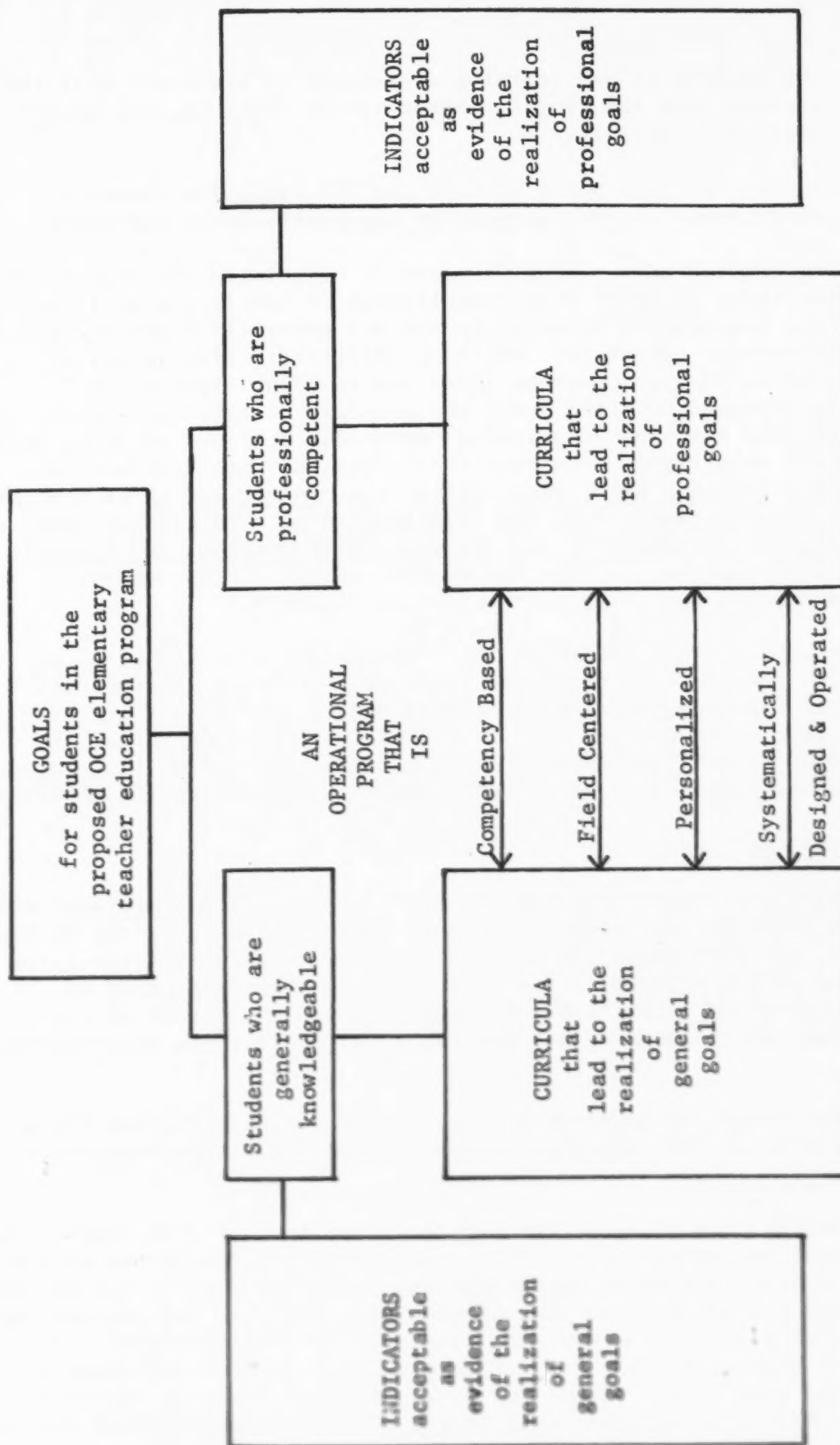


Figure 8. A schematic representation of the content of the OCE Elementary Teacher Education Program

will tend to be organized around the disciplines that have sustained liberal education over the years, for example, the arts, humanities, sciences, etc., or around "issues" that crosscut disciplines. Also, they will tend to follow traditional modes of instruction. This is not to imply that such experiences will necessarily be organized according to traditional course structures, or that instruction will take place largely by lecture or discussion, but because of tradition, the logic of course structure as a means of presenting the content of disciplines, and the fact that persons from throughout the college will be responsible for providing such experiences, it is likely that they will assume more of these characteristics than will the foundation experiences that have a professional emphasis.

The outcomes expected to derive from these experiences are the knowledges, skills and sensitivities established by the Coalition as being minimally acceptable as evidence of a generally educated person. The knowledges, skills and sensitivities now required by the college in this regard are listed on page 70.

By contrast foundations experiences which emphasize professional development will tend not only to carry different content but will tend to be organized differently and presented in different formats. Here foundations experiences will tend to appear within the context of "instructional systems" (see the following section for a discussion of the concept of an instructional system) and will carry content that relates directly to the teaching process. As such they will become an integrated part of the observation, practice and assessment experiences that are designed to lead to the demonstration of professional competence. The subject matter of educational psychology, human development, instructional and evaluation methodology, the history and philosophy of education, etc. will provide the subject matter around which such experiences will be developed. The outcomes expected to derive from these experiences are the knowledges, skills and sensitivities that teachers need in order to create the conditions that will bring about the outcomes expected from the elementary schools.

In keeping with the ComField model, a special feature of the foundations thread of the curriculum is the requirement that all students show evidence that they have mastered the conceptual frameworks of the disciplines upon which they are to draw as teachers of young children. As used in the program a conceptual framework for teaching a discipline is that which Bruner and others have called "the structure of a discipline", and as such is assumed to be, simply, a conceptual framework around which the substantive content of a discipline can be organized and transmitted. It is that which, in Bruner's terms, "...permits any subject to be taught to any child at any level." As yet the frameworks to be mastered, the persons responsible for seeing that students master them, the nature of learning experiences to be used in facilitating such mastery, or the point in the program at which such mastery is to come about have not been specified--though mastery obviously will have to be accomplished upon entry to the Intern phase

of the program since students at that time will be responsible for demonstrating that they can get pupils to master such frameworks.¹

Operationally foundations experiences will be concentrated in the General Studies phase of the program, though not limited to it. Using traditional course structure as a referent, as many as three or four courses per term would be taken during the General Studies phase of the program, one or two per term during the Clinical Studies phase and no more than one per term during the Intern phase. The relationship of foundations experiences to other learning experiences within the program, as these vary across phases, appears in Figure 12, page 32.

The Self-Confrontation Thread

In the opinion of those who developed the ComField model a prerequisite to the meaningful personalization of any educational program is the understanding of one's self. It seemed reasonable to assume, for example, that in order for a prospective teacher to make a wise choice as to the educational context within which he wishes to work, the competencies needed to perform effectively within that context, the kinds of learning experiences to be pursued in the development of a given competency, or in the adoption of a teaching style, he needs to have a clear understanding of who and how he is as an individual. Towards this end the OCE program provides for experiences designed to foster self-understanding throughout the course of the educational program. These are called self-confrontation or SC experiences.

The self-confrontation thread of the curriculum is an integral part of a student's experience from the moment he enters the program. In the General Studies phase the focus of SC experiences is upon self in context. As such the experiences encountered by students as they enter the college setting, establish increasing independence from family and community or origin, find new friendships or establish new love relationships become the vehicles by which an understanding of self in context is explored. Both the student's sponsor and the upper classmen who serve within the Freshman Advising Program at the college take part in this exploratory process.

¹ The developers of the ComField model were aware of the potential consequences of the specification that calls for the mastery of frameworks for teaching disciplines. It was recognized, for example, that in many disciplines these are not as yet identified. It was also recognized that if persons in the disciplines would not assume responsibility for helping students master them that staff within the education program would have to. It was hoped, however, that this would be a responsibility willingly assumed by the discipline areas and that the assumption of such responsibility for students in education would bring the disciplines and education together in a mutually rewarding and productive relationship.

As the student moves to the Clinical Studies phase of the program SC experiences are designed to provide understanding of self as an individual. At this level the self-confrontation process involves responding to tests which are designed to assess commitments, beliefs, personality orientations, etc. and engaging in a series of nonjudgmental interviews in which the responses to those tests are explored. The student's sponsor is responsible for this aspect of the self-confrontation process.

By the time a student enters the Intern phase of the program the focus of SC experiences shifts to an understanding of self as teacher. Here self-confrontation experiences take the form of video tape playback of actual teaching performance, clinical supervision interviews, small group discussions that focus around peer reaction to performance, and the like. A central thrust of self-confrontation experiences at this level is their focus upon the definition of a teaching style that is consistent with perception of self as individual and self in context.

The Professional Orientation Thread

Just as self-understanding is essential to wise choice within a teacher education program so too is an understanding of the profession. To facilitate choice as to educational context within which to work, special competencies to be developed, or teaching style to evolve, a prospective teacher needs to have as complete an understanding of alternative contexts within which he might find himself as possible. Knowledge of alternative contexts will also contribute to the meaning taken from learning experiences encountered within the program as they will provide concrete referents for these experiences. It is toward these ends that professional orientation experiences are designed.

Like self-confrontation experiences professional orientation (PO) experiences start as soon as a student enters the program and continue throughout. In the General Studies phase of the program PO experiences focus on the nature of the educational process generally, and as such has students observe or in a limited way take part in a wide range of educational settings. One form of such participation is service in a school as a "teaching aide".

In the Clinical Studies phase of the program a student will continue to sample a wide range of educational settings, but these will be limited by and large to elementary schools. A central experience that will come during this phase is serving as a "teaching assistant". The school in which this occurs will also serve as the laboratory within which professional development experiences at the synthesizing level will be carried out and competencies required for an INITIAL level of certification demonstrated (see Figure 7, p. 19). In order to move students across contexts it is probable that a teaching assistantship will last only one or two terms at a particular school.

In the Intern phase of the program professionally orienting experiences will be limited to one school, but all of the professional experiences engaged in by teachers in the school, for example, professional meetings, inservice programs, and curriculum development activities, will be engaged in by the Intern.

Throughout the program PO experiences will be without formal assessment; they are intended to sensitize or orient, not lead to mastery of a particular knowledge or skill. As such the professional orientation thread of the curriculum is the only dimension of the program that does not have formal assessment associated with it. This is not to imply that PO experiences are without purpose or that their impact is ignored. They are always engaged in for a reason, and the conferencing that occurs around them is designed to assess informally that which is taken from them; but formal, empirically verifiable assessment is not associated directly with them.

As in the case of self-confrontation experiences, specifically designed professional orientation experiences are anticipated to decrease in frequency as students move through the various phases of the program (see Figure 12, p. 32).

The Professional Integration Thread

Conceptually, the "professional" curricula of most teacher education programs can be thought as being organized on a vertical axis, that is, a given subject matter area such as child development, instructional methods, or mathematics is organized into a course or course sequence that extends from the simple to the complex. Also most subject matter areas can be thought of as being offered relatively independently of another, and requiring only a given level of knowledge or understanding as an indicator of the mastery of a given area. Such a curriculum pattern is illustrated schematically in Figure 9.

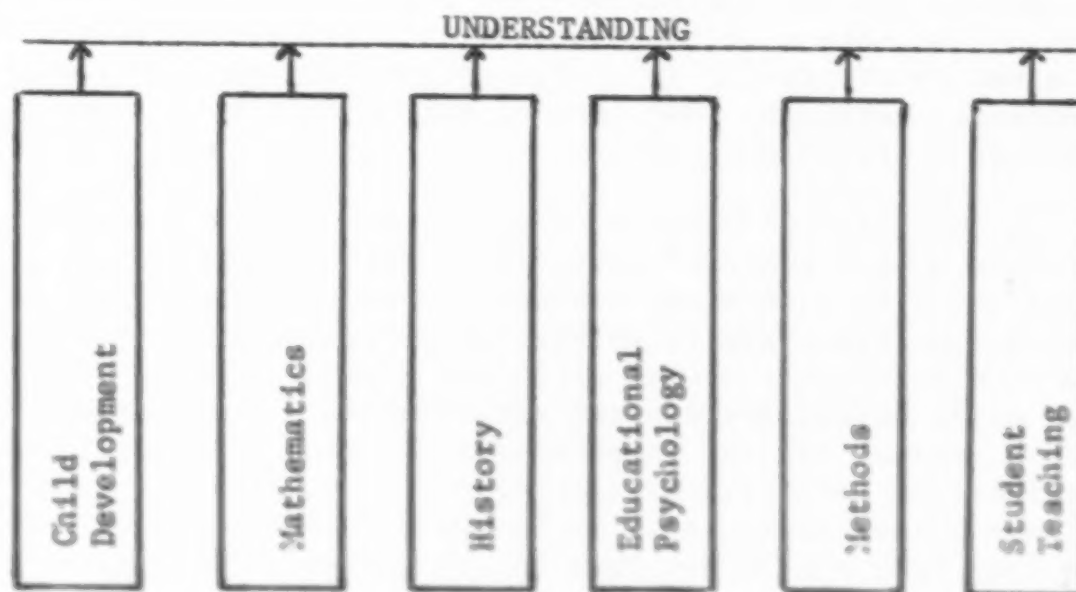


Figure 9. A schematic representation of the curriculum pattern found in most teacher education programs.

Implicit in such an arrangement is the assumption that prospective teachers, upon mastery of the various subject areas, can synthesize or integrate them and bring them to bear in concert to accomplish the outcomes for which they are responsible in schools.

The ComField model specifies a markedly different pattern of curriculum organization. Instead of courses organized around disciplines or subject matter areas a ComField based curriculum is organized into "instructional systems" around competencies, i.e., around the outcomes to be realized by the schools.¹ As such a ComField based curriculum can be thought of as being organized on a horizontal axis, for each instructional system contains pieces and parts of the various courses offered in most elementary education programs, but they are organized in such a way as to insure that the various knowledges, skills and sensitivities obtained through such separate learning experiences are integrated at a level that permits their effective use in carrying out the functions expected of a teacher in a school. Such a curriculum pattern is illustrated schematically in Figure 10.

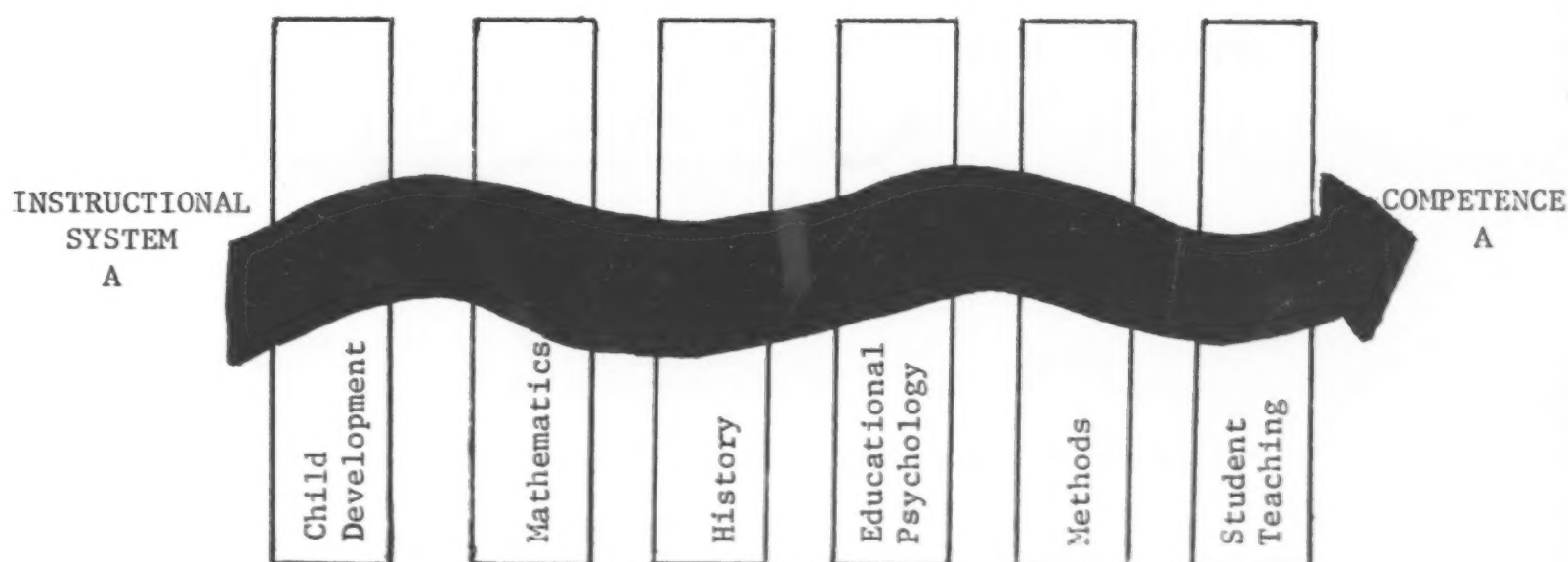


Figure 10. A schematic representation of the curriculum pattern found in a ComField based teacher education program.

Two observations seem appropriate in regard to the differences perceived between the ComField curriculum model and the more traditional model:

¹ An instructional system is defined formally within the ComField model as a set of learning experiences that have a known degree of reliability in fostering a given teaching competency in prospective teachers.

- 1) while the majority of the subjects taught in the present professional education curriculum are covered within any given instructional system, only that from within a given course that is relevant to the demonstration of a given competency is included in a system; and
- 2) the prospective teacher is not left to his own devices to synthesize and/or organize the various aspects of subject matter that comprise a given system. Each instructional system has built into it the provision for synthesis and consolidation of that which has been synthesized until the prospective teacher is able to demonstrate that he can put all of the pieces and parts together to bring about the outcome that is expected of him.

Four classes of learning experiences are found within each instructional system: a) orienting experiences; b) foundation experiences; c) synthesizing experiences; and d) consolidating experiences. Operationally these are defined as

- Orientation Experiences: definitions, concrete referents and models of the competency that the set of learning experiences entailed within an instructional system are to bring about
- Foundations Experiences: a set of learning activities designed to enable a prospective teacher to master a given bit of knowledge, a skill or a sensitivity
- Synthesizing Experiences: a set of learning activities designed to bring about an integration of the knowledges, skills and sensitivities mastered through foundations experiences at a level that permits the demonstration of competence under simplified (laboratory) conditions
- Consolidating Experiences: a set of learning activities designed to bring about an extension of the competencies demonstrated under simplified conditions to the point where they are applicable under real-life conditions

As used within the ComField model a learning activity is defined as a set of events which leads to a desired outcome, for example, a set of referents needed to understand the objective of an instructional system or a set of readings and discussions that lead to the mastery of the conceptualizations that are assumed to be prerequisite to the

performance of a given competency.

All classes of learning experiences contain multiple learning activities. As such they provide options for students with alternative learning preferences or needs, an opportunity to cycle through numerous activities to bring about a desired level of mastery or a required level of competence.

Implicit in the ComField definition of a learning activity is an assessment function. In each learning activity, as well as in each instructional system as a whole, assessment has two foci:

- a) assessment to determine whether a learning activity or an instructional system as a whole can be bypassed because of existing mastery, or if it can't, to determine the point in the learning activity or in the system as a whole where entry should be made, and
- b) determine when mastery or criterion performance has been reached.¹

The major classes of learning activities that appear within an instructional system are shown schematically in Figure 11. Detailed definitions of these activities appear in Appendix G. An example of an instructional system is provided in Appendix H. Detailed directions are provided for the development of instructional systems in Appendix I.

Procedurally, a student's progression through an instructional system is largely a matter of his own choosing. When he first enters a system he is provided an orientation as to the nature of the competency that the system is designed to bring about, that is, he is given examples of what the desired competency looks like. From that point on, however, progression through a system is under the student's control. If he thinks he can demonstrate the desired competency without special study he may ask for criterion assessment immediately; or he may engage in a series of foundations activities, return to the orientation activities, and then engage in synthesizing experiences until he is able to demonstrate competency under simplified conditions. Another student, or the same student in a different system, might choose to engage in synthesizing experiences before encountering foundations experiences - to see what it is that he really has to do before launching into the

¹ As indicated previously assessments relative to mastery of the individual knowledges, skills and sensitivities that derive from foundations experiences are to be used for guidance rather than certification purposes. So too are assessments around practice activities that lead to synthesis or consolidation. Criterion assessments relative to competency demonstrations are made only when a student requests them.

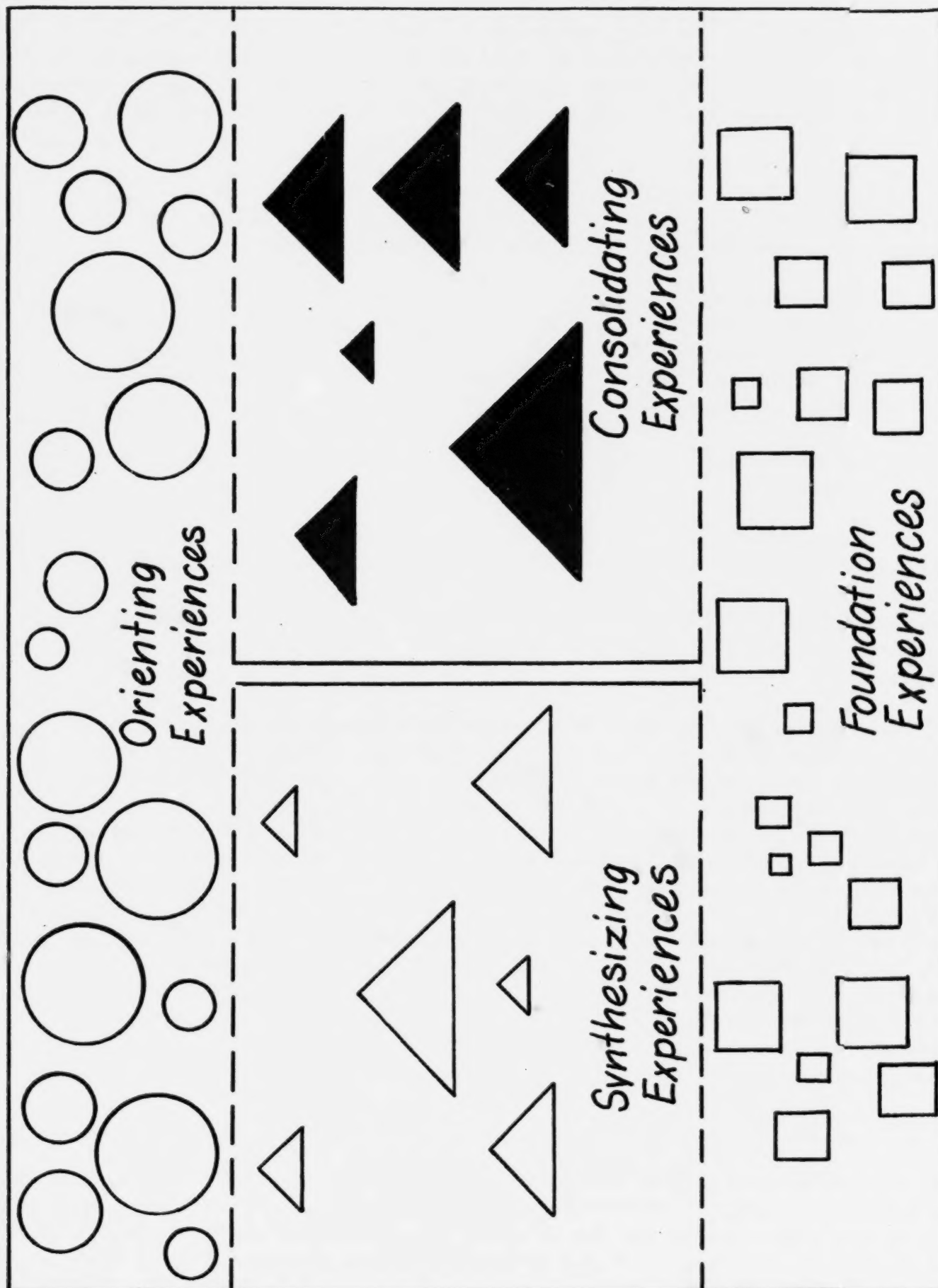


Figure 11. A schematic representation of the major classes of learning experiences found within an instructional system.

process of building a foundation on which to do it - or he might cycle between synthesizing and foundations experiences repeatedly. The only constraint on a student's progress through a system is that he be accepted as an Intern before he is free to engage in consolidating experiences or to ask to demonstrate criterion competency under real-life conditions. In Figure 11 the double line between synthesizing and consolidating experiences represents this constraint. Beyond the one constraint, however, and the requirement that the first experience encountered in any system be an orienting experience, a student's pattern of movement through a system is one of his own making.¹

As with all other curricular threads, the professional integration thread extends through all three program phases, though the extent to which students engage in PI experiences varies by phase. In the General Studies phase relatively few integrating experiences are encountered, for relatively few professional competencies need to be demonstrated by a prospective teacher before entering the Clinical phase of the program. The number of integrative experiences increase markedly when a student enters the Clinical phase, however, and they increase even more when he enters his Internship. In this sense, the professional integration experiences follow a pattern that is essentially a mirror image of the foundations experiences. More is said of the relationship between professional integration experiences and other learning activities in Part III of the report.

The Interaction Between Curricular Threads

The instructional program that has been proposed by the CCE Coalition has been designed to maximize interaction between curriculum threads: professional integration experiences draw upon information gained in foundation experiences; professional orientation experiences provide referents for all other learning experiences; and self-confrontation experiences both draw upon and provide a basis for all other experiences. Moreover, negotiations between sponsor and student and clinical supervisor and student are intended to further interlace all that is gained from the program. The relationship between curricular threads in the program is shown schematically in Figure 12.

¹ When an instructional system first goes into operation there will be no particular basis for predicting the "best path" through the system for a particular student. As time passes, however, and as students with known characteristics pass through a particular system, it will be possible to obtain data on "preferred" or "most likely to be successful" paths for students with particular characteristics. Once data of this kind become available the potential for prediction, and thereupon the possibility for effective guidance, will come into being.

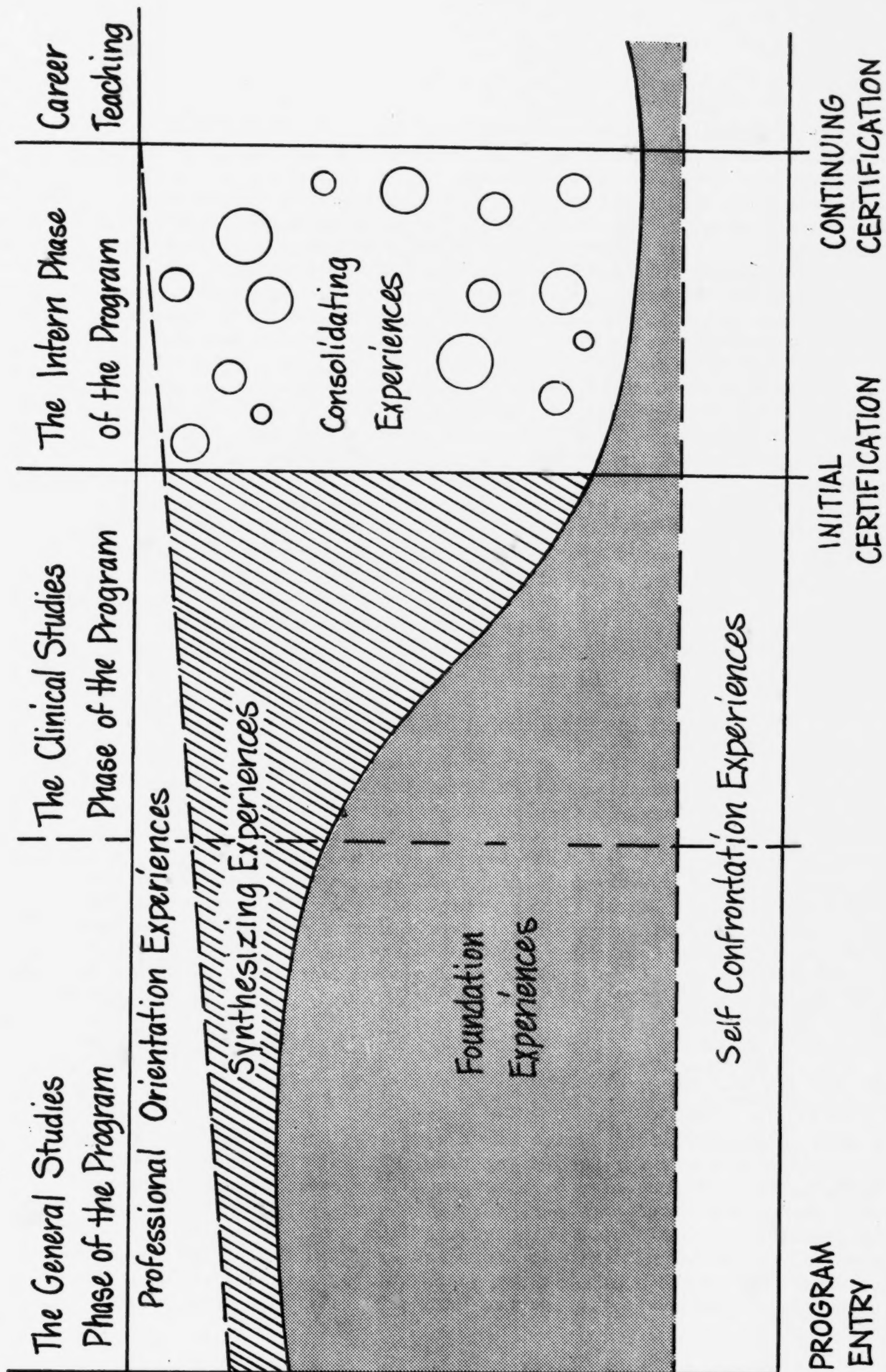


Figure 12. A schematic representation of the proportion of time a student is likely to engage in various classes of learning experiences as he progresses through the program.

The Operation of the Program

The instructional program proposed for elementary teacher education at OCE has been described briefly in the previous section. The description of the program, however, and its operation, are two different matters. In order to actually operate such a program, that is, to develop it, to have students interact with it, and to evaluate its effectiveness over time, a variety of supporting functions must be brought to it. The purpose of the present section is to describe these functions and the mechanisms which carry them.

In order to provide the means by which instruction within the program can meet the specifications set for it, thirteen separate though interdependent supporting functions must be provided. Eleven of these are essential to both the implementation of the program and its long term operation; two are required only for its implementation. The eleven basic functions are:

1. an instructional objectives function;
2. an instructional design and development function;
3. an instructional operations function;
4. an information management function;
5. a data generation function;
6. a cost accounting function;
7. a staff selection and development function;
8. a program policy and review function;
9. a program execution function;
10. a program adaptation function; and
11. a facilities, equipment and supply function

The two functions specific to program implementation are:

12. an accommodation function (which facilitates the integration of the emerging and the on-going programs); and
13. a dissemination function.

In order for a supporting function to be achieved, a structure (or set of substructures if the function is complex) must exist to carry the operations that carry out the function. In the Oregon adaptation of the ComField model the composite structure(s) needed to achieve a

supporting function is referred to as a "mechanism". As such the proposed program requires thirteen separate mechanisms to enable it to operate as designed.

When first encountered, the reaction to both the concept and the number of mechanisms proposed can be one of dismay. The very term suggests an impersonal, "mechanistic", dehumanizing quality, and their number suggests a totally undue emphasis upon that which makes the program work. From the point of view of those who have designed the program, however, or for that matter those who developed the original ComField model, neither is the case. In fact, just the reverse is true. In order for instruction to occur in any educational setting a host of supporting functions must exist: program objectives must be established, instruction must occur, students must be evaluated, information must flow, records must be processed. In most teacher education programs such functions are taken care of as a matter of course by administrators, registrars, counselors, instructors, and maintenance personnel, and the structures needed to support them are an integral part of a college organization. In a ComField based program, however, new functions must be performed, or at least old functions need to be performed in new ways, and as a consequence, new structures are needed in order to perform them. The commitment to a field centered program, for example, and the commitment to a coalition of institutions and agencies to operate it, has far reaching implications for the establishment of operational policy, the specification of program objectives, program execution, etc. Similarly, the commitment to the personalization of instruction has far reaching implications for the number and kind of learning experiences needed to accommodate students in the program, and the procedures by which students move through such a program, the facilities and equipment, data generation and information management systems needed in their support, etc. The mechanisms proposed within the OCE program are those seen as being needed to carry out the functions required to meet the implications of such commitments. They are, in a sense, the vehicles by which the program can become personalized, data dependent and field centered, and as a consequence must be planned and provided for with the same care that curriculum is planned and provided for.¹

The structure, function and composition of each of the thirteen mechanisms, and their interaction, is described in detail in Part IV of the report.

¹ Another indication of the centrality of the operational mechanisms in the proposed program is the fact that all costing for program implementation, and its operation subsequent to its implementation, has been based upon resource estimates projected for the operation of the various mechanisms. Estimates of the resources required to operate each mechanism and the dollar estimates associated with those projections are summarized in Part VI of the report.

For purposes of description the thirteen mechanisms have been grouped into four clusters: those which pertain directly to the instructional program, those which support the instructional program, those which are related to the management of the over-all program, and those which are designed to meet the specific needs which emerge when attempting to involve a wide range of institutions and agencies to change from one educational program to another.

Actually such groupings are more than a writing convenience for they parallel closely the clustering of the various mechanisms as they operate in actual practice. Functionally, for example, there is a close working relationship between the Instructional Objectives, the Instructional Design and Development, and the Instructional Operations mechanisms. Similarly, the Data Generation, the Information Management, the Cost Accounting and the Staff Selection and Development mechanisms operate largely as a unit in support of the instructional mechanisms and the over-all program management mechanisms. Much the same kind of clustering occurs with the Program Policy, Execution and Adaptation mechanisms -- the mechanisms which provide for the integration or coordination of the over-all program -- and with the two changeover mechanisms. The relationship between these mechanisms, as they interact in program operation, is illustrated schematically in Figure 13.

While the idea for formalizing such mechanisms is somewhat foreign in the practice of education, there is, in the opinion of those who have been associated with the ComField model, little alternative to such formalization. As this occurs, however, there is the danger that the primary purpose of the program will be lost sight of or relegated to a position of secondary importance. With so many functional components needed in its support, a ComField based program is particularly susceptible to this threat; any of the support components could readily become "an agency unto itself."

The organizational structure summarized in Figure 13 represents an effort to protect against this kind of danger. Conceptually, the structure a) places the instructional program squarely in the center of things, b) stresses the idea that information and directional influence flows both from the instructional component to the support units and vice versa, and c) provides for a continuous flow of information to the program management components so that program adaptation can be effected wherever necessary in order to maintain balance and perspective. While such an organizational structure cannot guarantee that all units within a ComField based program will be appropriately supportive of instruction, or act in concert, it does provide an operational framework which at least makes such interaction possible.

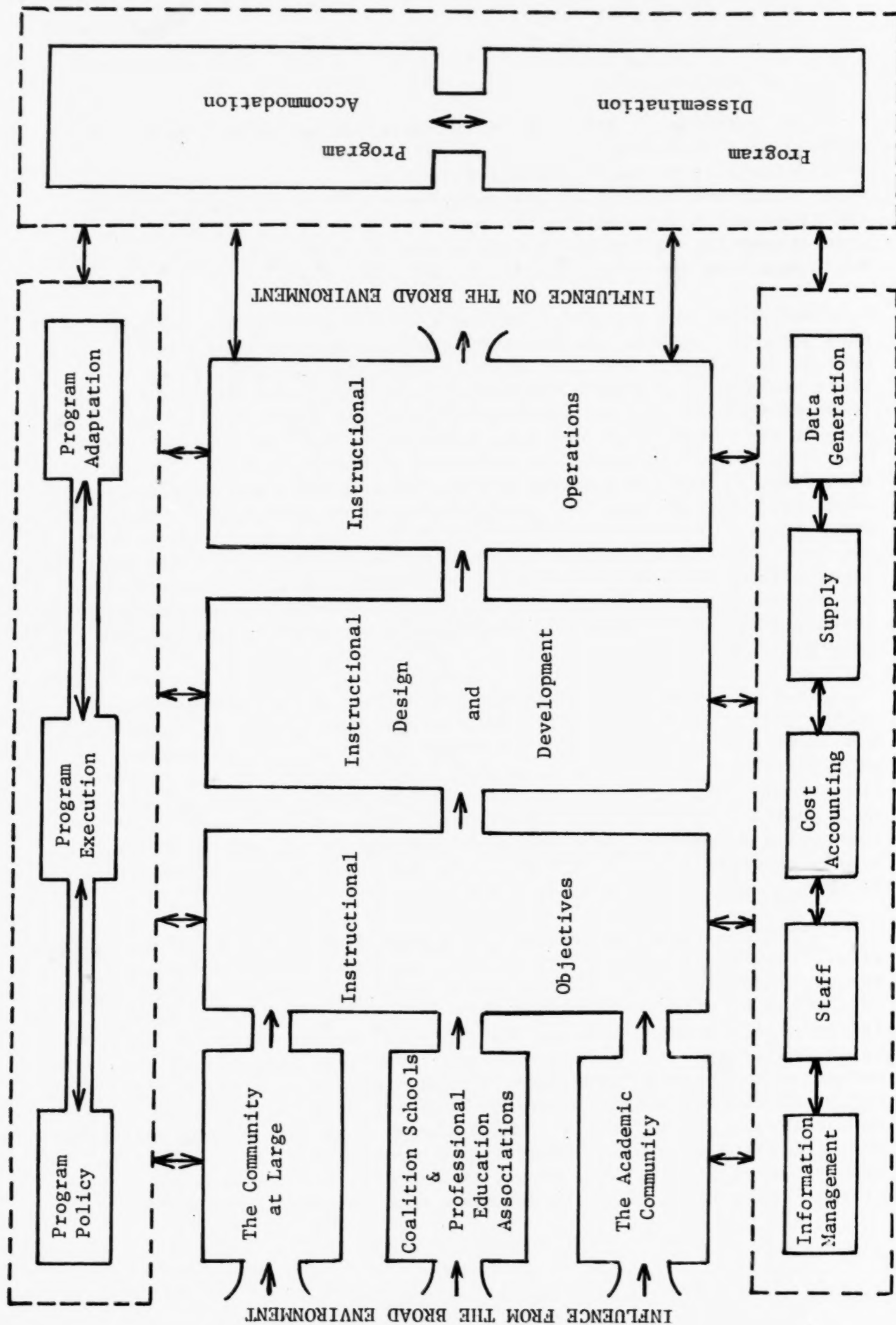


Figure 13. A schematic summary of the mechanisms needed to operate the elementary teacher education program proposed at OCE, and their interrelationships.

Reaction to the ComField Model on the Basis of the Feasibility Study

The general reaction to the ComField model as it was originally described by those who have worked on the Oregon feasibility study is that it serves reasonably well as a broad, organizing conceptual framework but that the specifications it provides for program design need elaboration and clarification. Specifically, the conceptual framework underlying the ComField model (see pages 6 to 16 in Volume I of the Phase I final report), with some elaboration, held up well as a guide to the development of an operational program, but the specifications that derived from that framework for either the model generally (see pages 17 to 36 in Volume I of the Phase I final report) or for implementing an operational program (see pages 37 to 130 in Volume I of the Phase I final report) did not hold as well.

Two aspects of the conceptual framework underlying the model needed elaboration: the personalization process and the nature and operation of a ComField Coalition. These elaborations have been made and have been summarized briefly in the preceeding pages.

Changes required in the general model specifications were primarily ones of reorganization or reconceptualization rather than ones of addition or deletion. Nearly all of the general model specifications found their way into the program proposed at OCE, but their synthesis took a somewhat different form than outlined in the original model description. While this variance was not so great as to deny the utility of the original model it was sufficiently great as to effectively establish a new set of general model specifications. Essentially these have been summarized in the present chapter.

As might be expected it was at the level of program operations that the variance between specifications contained within the model and specifications that were acceptable to members of the OCE Coalition was the greatest. This partially stemmed from the necessity of having to become explicit about detail. Additionally, however, it stemmed from the elaborations required in the basic conceptual framework underlying the model and in the general model specifications. With so much change occurring in the broader dimensions of the model, change at the program operations level had to follow. A summary of these changes will be found in Parts III and IV of the report.

In reflecting upon the utility of the original description of the model as a guide to the development of the program proposed at OCE, it should be kept in mind that other institutions or other states may find it to be either more or less functional than was the case in Oregon. It is quite likely, for example, that institutions in the state of Washington would find less within the original description of the model to be changed, since personnel from those institutions were primarily responsible for the initial development of the instructional components of the model -- and those were the components that received most change

by the Oregon group. On the other hand, institutions who had no part in the initial design of the model may find it to be even more lacking than did those who developed the OCE program. The likelihood of this being the case points to two conclusions that those who have been involved in the model program in Oregon have been forced to come to:

- 1) to have general utility a model must be stated at a general level of applicability, for example, at a level corresponding to the "conceptual framework" or the "general model specifications" provided within the initial description of the ComField model; and
- 2) to implement a model based program those responsible for its implementation must be involved in its definition.

Both conclusions assume that a model can at best be only a guide to operational program development, and that those responsible for an operational program must have ultimate authority for its definition.

CHAPTER 2

JUDGMENTS AS TO THE FEASIBILITY OF IMPLEMENTING THE PROPOSED PROGRAM WITHIN THE OCE COALITION

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Four aspects of feasibility were investigated in relation to implementing the program proposed within the OCE Coalition:

1. The acceptability of the program to all who would be affected by it;
2. The economic feasibility of developing and operating such a program;
3. The availability of the human resources needed to develop and operate it; and
4. The ability of OCE and its coalition schools to accommodate the staff and activities that would have to be added to effect a change from the existing to the proposed program.

By design, these various aspects of feasibility also were investigated in the order in which they have been listed. Obtaining evidence of economic feasibility without first obtaining evidence of acceptability would represent a relatively empty exercise. Similarly, the knowledge that a program is desired and that it is economically feasible is not enough; evidence must also be obtained as to the availability of the human resources needed to implement such a program and the capacity of a given setting to accommodate the increased energy required in its implementation. The purpose of the present chapter is to summarize the conclusions reached within the OCE Coalition about these dimensions of feasibility.

Acceptability

Essential to the adoption and implementation of a program that requires major change is the opportunity for those who will be influenced by the change to have a part in its definition and to understand its implications. It is simply not possible, for example, for a department chairman or a dean of faculty to impose a program upon a

staff and have it operate if the staff does not understand it or is not committed to it. Nor is it possible for an elementary education faculty to institute a major program change without first obtaining understanding and support for it within the whole School of Education, the college administration that must ultimately approve the program, the public schools with whom they must work in the program, etc. Within this frame of reference evidence as to the acceptability of a program means that it can be shown that all who are to be touched by the program have in fact had an opportunity to influence its definition, and that by having had this opportunity have come to both understand and become committed to a) what the proposed program is about, b) what it will mean for existing programs, c) what it will mean when it is put into operation, and d) what it means to make it operational.

The range of persons from whom evidence as to the acceptability of a proposed program must be obtained will necessarily vary by the nature of the program that is being proposed. Since the program proposed at OCE calls for a coalition of institutions and agencies, and rests within the context of an integrated state system of higher education, evidence as to the acceptability of the program must be obtained from a wide range of sources. Thirteen such sources were identified:

1. The elementary education faculty, which includes staff members from all departments across campus;
2. Students in the elementary education program;
3. The faculty of the Department of Education and Psychology as a whole;
4. The Advisory Committee on Teacher Education of the faculty senate;
5. The faculty of the college as a whole;
6. The administration of the college;
7. The faculty and administration of participating school districts;
8. The boards of education within participating districts;
9. The faculty and administration of the Teaching Research Division of the Oregon State System of Higher Education;
10. The professional education associations in the state;
11. The State Department of Education;
12. The Chancellor of the Oregon State System of Higher Education; and

13. The State Board of Higher Education.

Both the procedures followed during the course of the project that permitted each of these "constituent" groups to reach a judgment as to the acceptability of the proposed program, and the judgments they gave, are summarized in the next few pages.

Procedures Followed During the Course of the Project that Permitted Representatives from Each Constituency Within the OCE Coalition to Assess the Acceptability of the Proposed Program

THE PROCEDURE FOLLOWED IN DEFINING THE PROPOSED PROGRAM. Consistent with the assumption that commitment to a program can be achieved only if the individuals or the institutions that are to be involved in its implementation have had an opportunity to influence its definition, a task force comprised of representatives from the central constituencies within the OCE Coalition developed the initial design for the program. Operationally, this involved members of the OCE elementary teacher education faculty, students enrolled in the OCE elementary teacher education program, staff from the public schools, and staff from Teaching Research in adapting the specifications of the original ComField model to fit the commitments and constraints of the OCE setting. The task force was supported in its design function by an advisory body that consisted of a staff member from each of six other institutions in the state that prepare elementary school teachers and selected staff members from the school districts that work with these six institutions.

THE PROCEDURE FOLLOWED IN DETERMINING THE ACCEPTABILITY OF THE PROGRAM DESIGNED BY THE TASK FORCE TO MEMBERS OF THE COALITION. A six step procedure was followed in reviewing the program proposed by the task force:

- 1) a meeting with members of each of the constituencies within the coalition to orient them to that which was being proposed;
- 2) a meeting with representatives from the various constituencies to clarify questions about the proposed program and to receive recommendations relative to it;
- 3) a meeting with the same representatives to clarify questions about the five-year plan for program implementation and receive recommendations relative to it;
- 4) meetings with the State Department of Education, the deans and directors of teacher education in the institutions comprising the state-wide consortium, the Vice-Chancellor of Academic Affairs for the Oregon State System of Higher Education, and the Advisory Committee on Teacher Education of the OCE Faculty Senate to clarify questions about the program and to receive recommendations relative to it;

- 5) a final reading/editing conference by selected members from the coalition; and
- 6) a set of "balancing" conferences where the program that had been proposed was weighed against the projected costs of its implementation and long-term operation, and modified until manageable within realistic resource estimates.

A summary of the orientation and planning meetings held with members of the Coalition appears in Appendix L. The persons involved in the reading/editing conference are listed in the Preface.

On the basis of the involvement described above, members of each constituency within the coalition were asked to make a judgement as to the operational feasibility of the program being proposed. Without exception, though with the qualifications of "on the basis of the information available" and "on the assumption that outside funds would be available to support initial implementation costs," everyone within the coalition felt that the proposed program should be implemented with all possible speed. The position taken by members of each of the constituencies within the coalition, and the information base upon which they were acting, is summarized in Table 1.

Economic Feasibility

A primary determinant of the economic feasibility of the proposed program is whether the cost of operating the program, once the change-over has been made, will be within available state funding. The rationale underlying such a constraint is straight forward: ultimately the resources required to operate and maintain the program will have to be local resources, and to plan a program which would not be able to be maintained within those resources would represent fiscal irresponsibility.

Two problems are encountered, however, in attempting to forecast operational costs: 1) estimates have to be made on the basis of a program that has not as yet been fully developed and tested, and 2) the funding which will be available at that time is not predictable (i.e., the economic and legislative environment in which the program will be operating is not known). As a consequence, a three-step process was followed in attempting to insure that program operation after changeover will be within funding limits:

1. Operating costs for the ongoing OCE Elementary Teacher Education Program were identified and projected for 1976 as an estimate of the most likely level of funding available for program operation at that time;

TABLE 1. A Summary of Judgments as to the Feasibility and Desirability of the Proposed Program
by Members of the OCE ComField Coalition

Member of the Coalition	Feasible	Desirable	The Basis on Which the Judgment Was Made
1. Elementary Education faculty	Yes	Yes	Heavy representation on the program development team; periodic reviews of that being proposed by the pro- gram development team; participa- tion in both coalition planning exercises; participation in the reading conference.
2. Students in the elementary Education program	Yes	Yes	Heavy representation on the program development team; periodic reviews of that being proposed by the program development team; partici- pation in both coalition planning exercises.
3. The Department of Educa- tion & Psychology as a whole	Yes	Yes	Orientation, along with interested faculty from across campus, to the proposed program; observers at both coalition planning exercises.
4. The Committee on Teacher Education of the Faculty Senate	Yes	Yes	An orientation to the program; a final review of the program following changes made as a result of the coalition planning exercises.

Table 1 continued.

Member of the Coalition	Feasible	Desirable	The Basis on Which the Judgment Was Made
5. The faculty of the college as a whole	Yes	Yes	An orientation to the program at an open meeting (announced by department chairmen); attendance as participants and observers at the two coalition planning exercises.
6. The administration of the College	Yes	Yes	Involvement in program development through review and advisory functions; formal orientation; full participation in the two coalition planning exercises; involvement in the balancing exercise.
7. The faculty & administration of participating school districts	Yes	Yes	Involvement in program development; formal orientation; full participation in the two coalition planning exercises.
8. The school boards within participating districts	No Judgment	No Judgment	
9. The faculty & administration of Teaching Research	Yes	Yes	Heavy representation in the program development team; participation in the two coalition planning exercises; representation in the balancing exercise.

Table 1 continued.

Member of the Coalition	Feasible	Desirable	The Basis on Which the Judgment Was Made
10. The Professional Education Associations	Yes	Yes	A series of orientation sessions (see Appendix L); participation as observers in the first coalition planning exercise.
11. The State Department of Education	Yes	Yes	Representation in the review and advisory committee to the project; participation as observers in the first coalition planning exercise; formal review following the two planning exercises by the staff responsible for certification requirements within the department.
12. The Chancellor's Office of the Oregon State System of Higher Education	Yes	Yes	The Vice-Chancellor for Academic Affairs participated in the project from its inception as Chairman of the Policy Committee; the Chancellor and Vice-Chancellor for Academic Affairs were present when the program was reviewed by the Academic Affairs Committee of the State Board of Higher Education.
13. The State Board of Higher Education	Yes	Yes	A review of the proposed program by the Academic Affairs Committee of the State Board of Higher Education.

2. Estimates were made of the likely operating costs for the proposed program in 1976, and adjustments were made through "balancing" conferences until projected operating costs were within reasonable range of projected resources; and
3. A cost control procedure was devised which will be activated after the second year of the implementation effort to insure that program operation will be consistent with the availability of state and local resources by 1976.

Projected Current Program Operating Costs

The best estimate of funding available for program operation in 1976 is a projection of the funding available for current program operation. A comparison of the 1968-69 actual operating costs with costs forecast for 1975-76 on the basis of present operations appears in Figure 14. The forecast is based upon an estimated 6.5% per annum increase in salaries and wages, 5% per annum increase in materials, capital and other expenses, indirect costs of 67.07 of direct costs annually, and an anticipated elementary education enrollment increase of 12.4% in fiscal 1971 and 7% for each of the years following. These costs and rates were developed by the OCE business office and are deemed reasonable for approximating future funding.

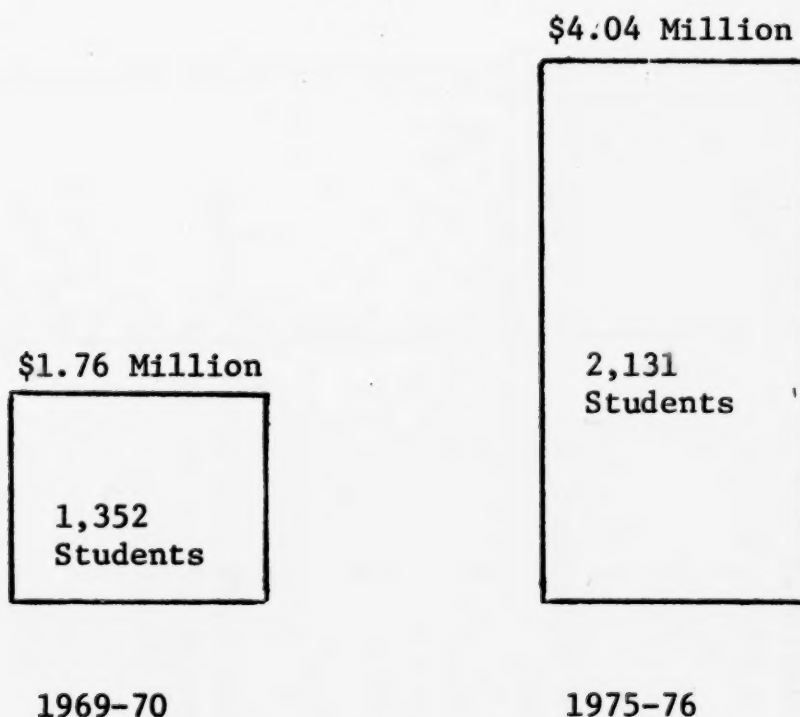


Figure 14. Current and projected funding available to the OCE Elementary Teacher Education Program.

Estimated Operating Costs for the Proposed Program

Cost estimates for program development and implementation are based upon estimates of the resources required to activate each of the operational mechanisms in the program (see Part IV for a description of program mechanisms) and support their operation until the program is fully implemented.¹ Given the estimated resources available in 1975-76 a base for expenditures was established against which all planning for development and implementation was referenced. As a consequence resource requirements had to be projected for each operational mechanism as it would function when fully operational. On the basis of these estimates it appeared reasonable that the proposed program could operate when fully developed with the funds that are likely to be available to it.² For a detailed estimate of the resources required to develop and operate all program mechanisms see Appendix K; for an estimate of the costs associated with their development and operation see Part VI of the report.

The Development of a Cost Control Procedure

While the apparent fit between estimated operating costs and available monies in 1975-76 is encouraging, it is not the kind of data that generates confidence on the part of fiscal planners. Both the estimates of funds that will be available and the estimate of operational costs for a program year to be developed are too loosely grounded for that. As a consequence, an internal means for projecting operational costs on a year-to-year basis, and ensuring that they will be kept within available funding, has been developed. Specific responsibilities for cost control have been assigned to the Execution, Information Management and Cost Accounting systems and will take effect the second year (1972) of program development. These responsibilities require analysis of program development-to-date, a forecast of operation costs for the fully implemented program, and a careful accounting of the coalition's ability to annually absorb those aspects of the new program that are ready for implementation. Results from these forecasts will then be further analyzed and distributed to program management staff for

¹ This does not include the Instructional Operations Mechanism. All instruction required during program implementation, other than that involved in preliminary field trials of new materials, is figured as OCE instructional cost.

² Two factors contribute heavily to this: 1) the freeing of staff time from instruction by heavy reliance upon student-controlled instructional materials and utilization of "competent peers" in the instructional-management process, and 2) the absorption of the salaries of clinical supervisory staff for the Intern program by participating school districts.

recommendations, if necessary, for altering the rate or direction of program development to ensure that it will operate within available funding upon full implementation. In order to obtain continuously refined estimates of operating costs this analysis and forecast process will be repeated in year three (1973), four (1974) and five (1975) of program development. The responsibility for altering the program to fit within funding limits rests with the Executive Director and the Policy Board of the program. Advantages in using such a procedure are two:

1. It realistically recognizes the limitations of presenting a long-range operations cost forecast at this point in time, and it provides a means by which most current cost data generated within the program can be used to prepare better forecasts; and
2. It presents an opportunity to assess operating costs of the program long before its completion, this allowing for redefinition of the program or reallocation of program resources to ensure that operating costs and available funding are compatible.

In operating the cost control procedure the balance sought between resources and projected costs will be guided by an estimate of the rate at which the new program will replace the old. The target for change-over, in terms of the percentage of students engaging in the new program, is as follows:

	Development Year						
	1971	1972	1973	1974	1975	1976	1977
Percentage of students in the new program	--	10	25	65	90	95	99

Using this time table as a rough guide decisions relative to program acceleration, deceleration, long-term cost estimates in light of current expenditures and program maturity, etc. can be enhanced.¹

¹ It will be noted that two "contingency years" have been added to reach a state of full program implementation. Even then a one percent deficiency in year 1977 is anticipated. This implies that some outside support will probably be necessary for program development even after seven years of implementation effort. Such contingency factors will probably be of a nature that if outside funds were unavailable at that time no serious handicap in new program operation would be sustained, or that unfinished aspects would need to be extended slightly longer in reaching their completion.

Given the assumptions, procedures and constraints that have been outlined, and the availability of monies from outside sources in the amounts specified in Part VI of the report, the program envisioned is economically feasible. If monies cannot be obtained from outside agencies to support changeover costs, however, then the program simply is not economically feasible -- at least not if it is to be developed within the time line proposed. It is estimated that a period of twelve to fifteen years would be required to implement the program if only state and local funds were available for development instead of the five to seven years estimated with adequate funding from outside sources.

The dependency of program development upon outside monies does not imply that the proposed program will be abandoned if outside developmental monies are not available. The OCE Coalition is committed to develop the program with or without outside support, but the task will be difficult and the time required will be great if limited only to local resources.

The Availability of Human Resources

Assuming that monies can be found to support development, and assuming that once implemented the cost of program operation will be manageable within the funds anticipated from local sources, there is still an overriding feasibility question, namely, are the human resources needed to carry out the program available? The development and operation of a program of the kind being proposed will require competencies not usually found within the faculty of an elementary teacher education program, and as a consequence, institutions that wish to implement such a program must be clear about the kind of personnel that will be needed to do so.

The OCE Coalition is fortunate in this regard for both OCE and its cooperating school districts have been moving in the direction outlined in the proposed program for the past decade (since the initiation of the Ford Foundation sponsored "Oregon Program").^{1*} As an outgrowth of the Oregon Program, OCE established a network of off-campus teaching centers, entered contractual relationships with school districts for the support of school based clinical supervisors, engaged in the systematic development of instructional materials, etc.

In addition, the Teaching Research Division of the Oregon State System of Higher Education is located on the OCE campus. Teaching Research, as the instructional research and development arm of the Oregon State System of Higher Education, has had a wide history of experience in activities comparable to those which will have to be

* See references at the end of the chapter.

engaged in the implementation of the proposed program. Furthermore, a history of cooperative effort between OCE and Teaching Research makes it possible for the staff of the two institutions to work together with understanding and trust -- a relationship which is not commonly found between colleges and educational research and development agencies. Without such a relationship between OCE and TR, and between OCE and the public schools, it is hard to imagine how a program of the kind proposed could ever function for it is totally dependent upon an effective meshing of the competencies possessed by these three kinds of institutions. A brief description of the schools participating in the coalition appears as Appendix N; a description of Teaching Research appears as Appendix O.

In order to convey some idea of the human resources needed to implement the proposed program the series of tasks to be accomplished in its implementation, and the experience that OCE, Teaching Research and the participating school districts can bring to them, will be cited.

1. The design and development of instructional materials.

With the advent of the Oregon Program, both OCE and Teaching Research, in cooperation with school districts throughout the state, pioneered in the systematic development of instructional materials; Teaching Research and OCE, under the leadership of Drs. Kersh^{2,3} and Twelker^{4,5,6} have received national acclaim through their work in the application of the principles of instructional simulation to teacher education; Teaching Research is responsible for an EPDA sponsored program to provide school personnel with the competencies required for instructional research and development;⁷ and for three consecutive years Teaching Research has offered an Office of Education sponsored summer institute for college personnel from across the nation in the design and development of instructional systems. The manual that has evolved from these institutes is considered by many in the nation to be the best and most advanced description of the methodology of instructional systems development that exists.⁸

2. The development and operation of a performance based program.

The history of experience in the development of instructional materials lends itself to the development and operation of a performance based curriculum, for the careful measurement of objectives expected to derive from performance based instruction is at the heart of systems development methodology. Also, staff at OCE and Teaching Research have been working on the development of measurement methodologies that will accommodate the demands of such a program, and these are now becoming functional.^{9,10,11,12}

3. The development and operation of a personalized teacher education program.

Within the past two years OCE has carried out research on, and initiated, an intensive advisement program that provides the basis for

the personalization of the instructional program that is proposed.^{13,14,15} In addition the methodology of work contract negotiation specified as part of the personalization process has been implemented on a pilot basis in both the elementary education and the general education programs at OCE. The proposed methodology of personalization is also supported by work being carried out in the public schools by Teaching Research.^{16,17,18}

4. The development and operation of an information management system that will support a personalized, field-centered and performance based teacher education program.

OCE has long been a leader within the Oregon State System of Higher Education in the movement toward the utilization of computers in the information management process. Dr. Bert Kersh, Dean of Faculty at OCE, was Chairman of the Inter-Institutional Committee on Computer Applications, 1963-69,¹⁹ and currently is a member of the Governors Data Systems Committee. He also is on the steering committee for the WICHE-MIS project for higher education in the Western region of the United States.²⁰ Efforts in this area are supported by the computer assisted instructional program at Teaching Research,²¹ and the involvement of OCE and TR in the NSF Regional Computer Center at Oregon State University which has been experimenting with remote uses of computers in instruction.

5. To develop and carry out the research and evaluation functions required by a systematically designed, performance based teacher education program.

Much of the thrust of Teaching Research has been in the area of instructional research and evaluation, and the full range of expertise that the agency possesses in these areas will be available in support of the proposed program.²² Current efforts at the public school level to design data nets that will support empirically based on-line and reflective decision making are directly related to the demands of the task.^{23,24}

6. To develop and carry out the procedures required to obtain cost/benefits data on the on-going program.

The experience which OCE and Teaching Research personnel have gained in developing cost estimates for the proposed program represents a first step in the evaluation of the competencies needed to establish and maintain a system by which resources available to the program are to be allocated by objectives. Working with the management consulting firm of Cresap, McCormick & Paget has been most instructive in this respect, and they will be called upon as consultants to future costing efforts. In addition, the experience which Teaching Research is currently gaining through the development of the methodology needed to obtain cost/benefits data in the public school setting²⁵ should be of considerable value in meeting the cost accounting requirements of the program that has been proposed.

While the tasks listed do not represent an exhaustive catalog of those to be accomplished in implementing the proposed program, their mention points up the combination of resources, experience, and expertise that will be needed to carry them out. The summary of the experience that OCE and its participating school districts are able to bring to the implementation effort, in conjunction with those available through Teaching Research, is intended to show that in combination the members of the OCE Coalition probably possess the human resources needed to carry the task required to develop and operate a program of the kind proposed. But what of institutions that do not have such a resource pool readily available? What is the likelihood that institutions could assemble such a resource pool if it does not in large part already exist? While there is not a clear-cut answer to such a question, there is reason to be both hopeful and pessimistic. On the hopeful side is the fact that more and more institutions are moving to obtain personnel who possess expertise along these lines. On the pessimistic side is the fact that persons with such competencies are still a scarce commodity in education. As the situation now stands nationally, it is doubtful whether many institutions starting to assemble such a resource pool from scratch would be successful, or if they were successful, that those being assembled could begin working immediately and effectively with existing staff.

The Ability to Accommodate the Demands of Program Implementation

In developing a plan for implementing the program that has been proposed at OCE a dimension of feasibility emerged that was unanticipated at the outset of the project, namely, the ability of an institution to accommodate the increased energy level that will be required to develop the program without disrupting or in other ways threatening its on-going programs. Assuming that money was not an issue, and that the human resources needed could be found, how many new people and new activities could an institution the size of OCE be expected to accommodate without destroying the integrity of the institution? Could OCE, for example, manage to integrate into its on-going teacher education program half again as many staff members as are now in the program or as many as are now in the program? At the moment, the faculty engaged in elementary education across the campus number approximately fifty people. The estimated number of full-time-equivalent professional personnel needed to carry out the implementation plan during its first year of operation is 81; during the second year 111; and during the third, fourth, and fifth years 107, 82, and 52 respectively. In addition, some 26 full-time equivalent non-professional staff are projected for the first year of operation; 44 for the second year; and 40, 32, and 23 for the third, fourth, and fifth years. Is it reasonable to assume that an institution the size of OCE can in fact accommodate such an increase in personnel and activity without jeopardizing its ability to carry out the tasks for which it is currently responsible? Is it reasonable to assume that any elementary education program would be able to do so?

This became a matter of central concern in preparing the five-year plan for implementing the program, and the plan finally adopted reflected a number of considerations:

1. The kind of activities required in the implementation effort and the working relationships required between college, school and research and development agency staff are relatively well established within the coalition;
2. The energy required to implement the program is to be distributed between four constituencies within the coalition -- the cross campus elementary education faculty, the students within the elementary education program, seven school districts, and Teaching Research -- thereby reducing the impact of the implementation effort on any one segment of the coalition;
3. Staff assignments, with few exceptions, should involve either one-half time in developmental efforts and one-half time in operating the existing program, or one-half time in two aspects of the implementation effort. Such a staffing pattern should help reduce the danger of "separatism", "empire building", lack of sense of identity with colleagues, etc., which so easily emerges in the process of institutional change;
4. The implementation plan should reflect a considered judgment as to the energy level that can be accommodated by the coalition, and not forced to fit within a given time period.

Taking these considerations into account, the plan of implementation calls for a six-year period to bring all developmental efforts to a refined stage. In the judgment of those responsible for developing the implementation plan, attempting to accomplish the changeover process in less time would represent a high risk strategy.

Even with these considerations, and the open recognition by the administration of the college and schools that changing to the proposed program will significantly alter that which occurs throughout their institutions, there is question about the ability of the context to accommodate the energy increase that is scheduled for it. Armed with such recognition, however, the implementation effort can proceed with the awareness that the implementation schedule might well need to be modified, and that it will be when necessary.

Summary and Conclusions

Four dimensions of feasibility have been explored: 1) the acceptability of the proposed program to those who will be influenced by it; 2) the economic feasibility of the program; 3) the availability of the human resources to carry out the program given its acceptability and

the availability of funds to do so; and 4) the ability of institutions within the OCE Coalition to accommodate the increased energy that will be required to accomplish the changeover process. On all counts, so far as judgment is able to be made, the implementation of the proposed program within the OCE context appears to be feasible.

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CHAPTER 3

JUDGMENTS AS TO THE FEASIBILITY OF IMPLEMENTING A COMFIELD BASED ELEMENTARY TEACHER EDUCATION PROGRAM ON A STATE-WIDE BASIS

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Teaching Research

The study of the feasibility of implementing a ComField based elementary teacher education program at Oregon College of Education has always been seen as part of a study of the feasibility of implementing such a program on a state-wide basis (see Preface). The rationale underlying state-wide implementation is straightforward:

1. It would provide evidence of the feasibility of implementing a ComField based program in a variety of settings;
2. It would provide evidence of the effectiveness of a model based program on a significant political segment of the nation and thereby, if effective, increase the likelihood of its widespread adoption;
3. It would provide a test of a dissemination-utilization model that, if effective, could be used to optimize the impact of the OE models program across the nation;
4. It would, if successful, increase the quality of teacher education in a significant segment of the nation; and
5. It would decrease the likelihood of students majoring in elementary teacher education being penalized in moving from institution to institution within a state.

As submitted originally, the Phase II proposal included detailed plans for feasibility testing within each of the institutions within the Oregon consortium.¹ Generally speaking the plan involved four steps: a) representatives from each of the consortium institutions

¹Institutions that comprise the consortium are Eastern Oregon College, Oregon College of Education, Oregon State University, Portland State University, Southern Oregon College, and the University of Oregon within the Oregon State System of Higher Education, and Marylhurst College as a representative of the private institutions within the State. A map showing the geographical distribution of these institutions appears as Figure 1 in the Preface.

would be involved in the design and costing efforts at OCE; b) they would then familiarize their colleagues with what was being done at OCE; c) on the basis of this information each institution in the consortium would modify that which was being proposed at OCE to fit its own relatively unique characteristics; and d) cost estimates for implementation would be made on the basis of the revised programs.

With the granting of fewer funds than requested, the plan originally proposed for state-wide feasibility testing had to be abandoned. In an effort to carry out as much state-wide activity as possible, a state-wide Review and Advisory Panel to the OCE effort was created. The panel was made up of representatives from each of the colleges in the consortium and a representative of one of the school districts cooperating with each of the colleges in their elementary teacher education program. It served three functions:

1. To periodically review the work being done at OCE and advise about it from the point of view of the other institutions within the consortium;
2. to inform the faculties of the other institutions in the consortium of the work that had been reviewed; and
3. to determine the acceptability of the program being proposed at OCE as a basis for a state-wide elementary teacher education program.

Members of the Review and Advisory Panel met six times with program planning staff during the course of the project and a varying number of times with their respective faculty groups. These meetings, and the involvement of the Deans and Directors of the teacher education programs represented in the consortium as project Advisory Committee members, provide the basis for judgment as to the feasibility of implementing a ComField based program on a state-wide basis.

As with program implementation at OCE, several dimensions of feasibility had to be assessed when considering state-wide implementation:

1. The acceptability of the proposed program to other institutions in the state that prepare elementary teachers;
2. The acceptability of the strategy governing the implementation plan;
3. The economic feasibility of state-wide implementation; and
4. The availability of human resources needed to implement such a program.

The issue of follow-on institutions being able to accommodate the energy required to effect changeover is probably not as critical as it is to institutions within the OCE coalition since it is anticipated

that the major share of developmental work will be done within the OCE coalition.

The Acceptability of the Program Proposed at OCE to Other Institutions in the State

In planning for state-wide implementation, it has always been recognized that the program developed at the pilot institution would not be exactly applicable to other institutions within the state. To be functional a model based program must reflect the idiosyncrasies of the institution(s) which implement it. At the same time it has always been anticipated that the products that derive from the pilot institution would have utility for other programs as prototype procedures or materials that could subsequently be modified. As such, a state-wide plan of implementation would build upon the work carried out at the pilot institution but would provide for the unique requirements of other institutions.

This rationale is dependent upon the acceptability of the pilot program to the institutions that are to build upon it. What is the acceptability of the program proposed by the OCE coalition as a model around which to build a state-wide elementary teacher education program? Without exception the six institutions that comprise the Oregon consortium have found it acceptable as a point of departure for the development of a state-wide elementary teacher education program. So too has the State Department, the professional education associations within the state and the State System of Higher Education. Moreover, all have indicated that they would like to participate with the OCE coalition in a state-wide implementation effort. Letters from the Deans and Directors of Teacher Education expressing these views in behalf of the consortium institutions appear as Appendix O. The Foreword by Dr. Miles Romney expresses this view in behalf of the Oregon State System of Higher Education. Letters of endorsement were not obtained from the State Department and professional education associations for the present report although they are available on call.

Acceptability of the Strategy Proposed for Implementing a ComField Based Elementary Teacher Education Program on a State-Wide Basis

At the time the decision was made to submit a Phase II proposal, a preliminary plan had been worked for state-wide implementation should a Phase III grant be obtained. In general terms it called for each institution in the consortium to monitor that which was being developed within the OCE coalition, take for its own use that which was found to be acceptable or which was able to be modified to the point of becoming acceptable, and share all adapted products with other members of the consortium. It also recognized that different institutions would adopt differing amounts at differing rates in differing areas. With the exception of an increased sensitivity to the idiosyncratic needs of

institutions even when operating within the framework of a consortium the original plan still stands. It appears schematically as Figure 15.

Several points about the state-wide implementation plan warrant emphasis:

1. Institutions will differ in readiness to implement a ComField based program, and these differences must be accommodated;
2. Each institution must have the prerogative to differentially select from the materials that flow from the OCE effort and to adapt them as they see fit;
3. Extra financial and human resources will be needed by each institution to carry out the adaptations that they determine necessary; and
4. The community colleges within the state, and the remaining private institutions that prepare elementary teachers, must be made aware of the state-wide effort and helped to accommodate their programs to it. This is scheduled to take place in the spring of 1970.

The Economic Feasibility of Implementing a ComField Based Elementary Teacher Education Program on a State-Wide Basis

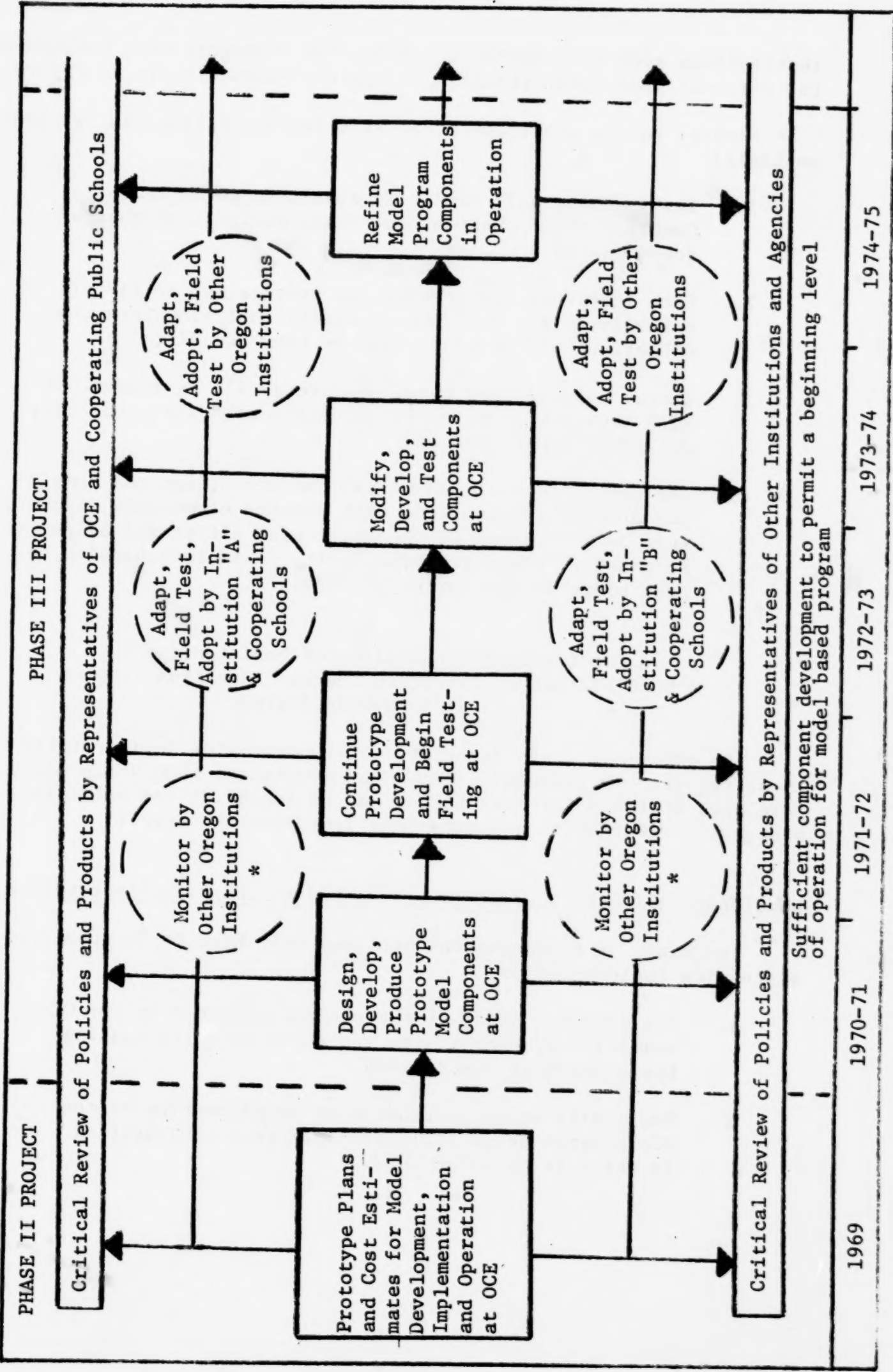
The principle costs associated with state-wide implementation are those required to translate, extend or supplement that which has been developed at the pilot institution and to establish and maintain a state-wide information and materials distribution network.

Developmental Costs Beyond Those Incurred at the Pilot Institution

Two kinds of developmental activity will have to be supported in state-wide implementation:

1. The detailed study of the program proposed by the OCE coalition by each of the institutions participating the state-wide effort; and
2. The modification, extension or supplementing of the OCE program until it is appropriate to the setting in which it is to be used.

Figure 15. The relationship of model development efforts at Oregon College of Education to other state system institutions and Marylhurst College.



* Some developmental activities may possibly be contracted to other institutions

THE DETAILED STUDY OF THE PROGRAM PROPOSED BY OCE, MODIFYING IT AS NEEDED, AND DEVELOPING A PLAN FOR IMPLEMENTING THAT WHICH HAS BEEN PROPOSED. Because all institutions participating in the state-wide developmental effort need to engage in this kind of activity, and all can engage in it irrespective of their readiness to initiate change in program, it is possible to obtain a relatively accurate estimate of the cost of the activity. Given the procedures to be followed (see Part VII of the report), and assuming that six institutions will be participating, it is estimated that the study-planning activity will cost approximately \$200,000. The activity would take place in the first year of the implementation effort, and would result in a specific plan by each institution for implementing the proposed program. A working budget to cover these activities appears on Page 237.

MODIFYING, EXTENDING OR SUPPLEMENTING THAT WHICH HAS BEEN DEVELOPED AT OCE. Because institutions participating in the state-wide effort will vary in their readiness to begin the changeover process and in the extent to which they will find the products developed at OCE useful in their own programs, it is not possible to project costs for specific implementation efforts beyond year one. As a consequence, extra developmental costs have been projected on the basis of a "per year average" for each institution for the last four of the five year implementation schedule. The formula used is one agreed to by institutional representatives, but it should be viewed only as a "best guess" as to what minimal average extra institutional development costs will be. The per year average rates projected for each of the six institutions are: \$40,000 (forty-thousand dollars) for years two and three and \$50,000 (fifty-thousand dollars) for years four and five. Including first year costs, the total estimated cost for program development, less that required for coordination and state-wide materials distribution, would be \$1,288,767.

The State-Wide Coordination of Materials Development and Distribution

For costing purposes coordination of materials development and materials distribution should be treated separately.

INTERINSTITUTIONAL COORDINATION. In order to coordinate implementation activities each institution must know the progress of each other institution. Operationally this will require provision for on-site visitations and extended interaction for awareness of program activities must extend beyond simply being told of that which is occurring.

One vehicle that will facilitate interinstitutional coordination is the Review and Advisory Panel that serves the OCE coalition. It will be recalled that the Review and Advisory Panel is to be made up of representatives from each of the consortium institutions in the state and the public schools that are participating with them in their elementary teacher education programs. Provisions must be made, however, for staff in addition to those on the Review and Advisory Panel to engage in on-site visitations. It is estimated that each institution and its

participating schools will require approximately \$3,000 per year to carry out such visitations. Funds to support Review and Advisory Panel member activities and on-site visitations on the part of OCE faculty are accounted for in the cost of developing the OCE program.

Assuming six institutions other than OCE in the state-wide consortium, the cost of the communication network needed in support of state-wide development would approximate \$18,000 per year or \$90,000 for the full five-year implementation period.

MATERIALS SHARING. In order to minimize developmental costs, and to capitalize upon the advantages that a state-wide information network provides, there must be provision for the easy sharing of materials and procedures that emerge from any and all institutions taking part in the developmental effort. Materials and procedures developed at OCE must be provided to any institution in the state that wishes to adopt or adapt them, and that which has been developed in all other institutions must be provided to institutions who wish to adopt or adapt them. By following such a plan the materials and procedures needed to support an operational program on a state-wide basis could soon be developed. If each individual institution was to "start from scratch" to develop its own program it is likely that the cost, the shortage of human resources to carry out such a developmental effort, etc., would be defeating.

As presently conceived no extra monies would be required to support the materials sharing activity. OCE has built into its budget provision for the development of multiple copies of all instructional materials and the budget projected to cover developmental costs within each institution in the consortium should make it possible for them to do the same. It should be understood, however, that that which would be shared would be first or second generation prototype materials rather than finished, marketable products.

On the basis of the best possible forecasting of costs at this point in time it appears that the state-wide implementation of a ComField based elementary teacher education program would require funds over a five-year period totalling approximately one and a quarter million dollars above and beyond the cost estimated for implementing the pilot program at OCE. Admittedly this is a minimal estimate, but assuming that it has some sense of reasonableness to it, it would represent an extremely sound investment. For a million and a quarter dollars OE would obtain: a) a test of the feasibility of adopting a ComField based program under a wide variety of conditions; b) a test of the effectiveness of a model based program on a politically significant segment of the population; c) a test of a dissemination-utilization model designed to optimize the impact of an illustrative teacher education program; and d) improved teacher education within a total state. While such value is dependent upon the coordinate investment of developmental monies in a pilot institution, the returns to be gained from such an investment represent, in a real sense, the kind of dividends that the pilot program makes possible. In the judgment of those who have been involved in program planning in Oregon investment in state-wide development is a kind of investment that a sponsoring agency should make.

Resource Availability

As found in the case of OCE, implementation is not only a matter of the acceptability of the proposed program to those who plan to adopt it or the availability of funds to support the changeover effort. There is also the matter of the availability of the human resources needed to carry out the changeover. An institution that wishes to implement a ComField based program will have to have staff with expertise in instructional materials design and development, instructional research and evaluation, information management, cost-benefits analysis, clinical supervision, work contract negotiation, the management of self-confrontation experiences, etc. Fortunately, as was the case with OCE, most of the institutions within the state have staff that can function in field settings, carry out clinical supervision, take part in instructional materials development, etc. Some of the functions to be performed within a ComField based program, however, such as information management, research and evaluation, and cost-benefits analysis, will require human resources be found to carry them out for most institutions in the state do not now have such resources. In this regard, Teaching Research should be able to be of general assistance, either in the role of preparer of staff to carry out those functions or as provider of services to institutions who do not wish to develop such capability within their own staffs. Since Teaching Research is an integral part of the State System of Higher Education, and is also free to work with institutions outside of the State System, these services should be able to be provided without complication.

Considering these factors, and considering that the task of development and implementation within the various institutions will be simplified by that which has been developed and tested at OCE, it seems reasonable to assume that the human resources needed for implementing a ComField based teacher education program on a state-wide basis exist in Oregon.

Summary and Conclusions

Four dimensions of feasibility relative to the implementation of a ComField based elementary teacher education program on a state-wide basis have been explored: 1) the acceptability of the program proposed by OCE as a basic framework for the elementary teacher education program in all institutions in the state; 2) the acceptability of the strategy proposed for implementing such a program on a state-wide basis; 3) the economic feasibility of implementing such a program; and 4) the availability of the human resources needed to carry out such an implementation effort. On all counts, so far as judgment is able to be made, there is reason to believe that a ComField based elementary teacher education program could be implemented on a state-wide basis.

PART II

OREGON COLLEGE OF EDUCATION AS A CONTEXT
WITHIN WHICH TO IMPLEMENT THE PROPOSED PROGRAM

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THE ELEMENTARY EDUCATION PROGRAM AT OREGON COLLEGE OF EDUCATION

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Oregon College of Education

The Context Within Which OCE Rests

Oregon College of Education is situated in Monmouth, a small community located in the mid-Willamette Valley. Since the population of Oregon is centered principally in the Willamette Valley, Monmouth is near the population center of the state. It is in a rural setting with a great part of the population at a medium or relatively low income level. Salem, with a population of 50,000 people, is located 12 miles east; Portland is 60 miles north; Corvallis is 20 miles south; and Eugene, 60 miles south. The Oregon beaches are 60 miles to the west and the summit of the Cascade Mountains is about 80 miles to the east.

There are a number of private liberal arts colleges and a major university located within 20 miles of OCE. Because of this, it does not serve a specific geographic area as a regional college. Although approximately 50% of its students come from Salem and surrounding areas, a large number also come from either out-of-state or from foreign nations.

The college operates as part of the Oregon State System of Higher Education. This system, organized in 1932, includes all of the public four-year institutions in the State of Oregon: Oregon State University at Corvallis, University of Oregon at Eugene, Portland State University at Portland, Oregon College of Education at Monmouth, Southern Oregon College at Ashland, Eastern Oregon College at LaGrande, Oregon Technical Institute at Klamath Falls, and the University of Oregon Medical School and University of Oregon Dental School in Portland. The State System also has a Division of Continuing Education which represents all institutions in making college level courses and special programs available to the people of the state. In addition the System includes the Teaching Research Division which is located on the campus of Oregon College of Education. Formerly administered through the college as an agency of the State Board of Education, the Teaching Research Division was made a part of the centralized activities for the State System of Higher Education in 1964. At the present time the Division employs 60 full time professional staff in research, development and evaluation activities.

The function of the Oregon State System of Higher Education is to provide widely spread educational opportunities throughout the state in the areas of general and liberal education. To avoid unnecessary duplication and competition, specialized professional and technical programs are centered at specific institutions.

OCE's Commitment to Teacher Education

The recent tendency of colleges of education to change their title to state colleges has not been followed by OCE. It was the decision of the administration and faculty of the institution to retain the title College of Education, and also to retain its commitment to teacher education as its primary emphasis. Presently, over 90% of its graduates are prepared to teach in the public schools. Of those, approximately 40% major in elementary education.

Oregon College of Education has been vitally involved in the preparation of teachers since it was chartered by the territorial legislature in 1856 as Monmouth University. The name was changed to Christian College, and the institution was chartered by the State Legislature in 1865. In 1891, it became Oregon State Normal School, continuing under that name until 1939, when the legislature designated all the state normal schools as colleges of education. Though Eastern Oregon College, Southern Oregon College, and Portland State University have re-defined their basic functions, OCE has retained its specialized emphasis.

Historically, Oregon College of Education has specialized in the preparation of elementary school teachers. Fifteen years ago the decision was made to include education of teachers at all levels of public school education. With teacher education as its primary emphasis, the college has thrived. In recent years, OCE has been the most rapidly growing institution in the Oregon State System. The college presently has approximately 3,650 students. The undergraduate population is comprised of about 40% elementary majors, 40% secondary majors and 20% general studies or pre-professional students. Predictions of future growth presume that the distribution of majors throughout the college will remain approximately the same. The recent development of community colleges in the state and in the local area may diminish the ratio of lower to upper division students, but no official assessment has been made.

As a result of its rapid growth, the recruitment of staff has been an important but seldom difficult task for the college. The favorable location, the competitive salary schedule in comparison with other small colleges, and the unique purpose and function of Oregon College of Education apparently have been positive factors in staff recruitment. The college is committed to quality education in its undergraduate program and has been able to successfully attract those academic people who consider the education of undergraduates as important. The growth in quality as measured by academic degrees, years of preparation, and other standardized measures is also notable in the various academic departments over the past ten years. There are strong teaching majors for secondary teachers in the arts, humanities, natural and social sciences, and in physical education, as well as in health and a number of highly specialized areas such as teaching the physically and socially handicapped.

Perhaps there is more support for the elementary major at OCE than there is on many larger campuses and in most universities. A large segment of the college faculty have taught in the public schools, and virtually all faculty see their role primarily as that of being an effective teacher. Elementary school teaching is seen as a worthwhile educational goal by the members of the academic departments as well as by the members of the professional education faculty.

General Education Foundation for Specialized Programs

The 1964 guidelines statement of the Oregon State Board of Higher Education designated Oregon College of Education as a liberal arts college with special emphasis on the preparation of teachers and on research in teacher education. The general education curriculum of the college provides the basis for programs designed to prepare teachers at all levels as well as various related programs, interdisciplinary in nature, which prepare students for advanced study and for other professions related to teaching.

At Oregon College of Education all students are provided a general education regardless of their area of specialization. This means that the college curriculum is designed to foster certain knowledges, abilities, and attitudes which define the liberally educated person. Each student is expected to show that he has made some progress in his efforts to achieve liberal breadth as well as mastery of a particular area of study before being graduated, but each in his own unique way. It is hoped that each student learns that the completion of a college education is only the beginning of a lifetime of learning.

An identifying characteristic of a liberally educated person is the ability and self-discipline to learn independently. The basic general education program of the college attempts to provide the driving force towards continuing study after graduation. It is directed toward the development of a capacity for learning in all fields of study.

The Professional Education Program for Elementary Teachers

The program for elementary majors, as described in the college catalog, includes the following requirements: 104 hours of liberal arts and related courses plus a 36 hour subject matter minor. Each student takes 48 credit hours in professional education, including 12 hours in either student teaching or an internship. Elementary majors may elect a second training minor, take electives in special education, or take other courses to complete the 192 hours required for the baccalaureate degree and for certification as an elementary teacher. The State Board of Education provides guidelines for planning the curriculum for elementary majors but does not dictate the specific courses or elements required for elementary certification. The

elementary graduates of the college are received favorably by public schools. In contrast to national figures, which indicate that only 50% of elementary education graduates enter the teaching profession, 90% of OCE graduates enter the profession and approximately 80% remain in teaching the second year.

Laboratory and field experiences begin at the sophomore level. Through a five-term sequence of team-taught, correlated and integrated course patterns, students participate in laboratory and practicum experiences prior to student teaching. These "block" programs allow for a more meaningful interaction between students and professors. The student can contribute more readily to this interaction as a result of the extended field experiences and his feelings and perceptions about them.

Distinctive Aspects of OCE's Elementary Teacher Education Program

The paragraphs which follow will focus on significant restructurings within the college during the past ten years that have led to an improved elementary teacher education program: a) changes in the basic liberal arts program, b) the development of an integrated developmental psychology sequence, c) the initiation of a new system of student advisement, d) the development of a correlated sequence in professional education, and e) the development of laboratory and practicum settings for short and long-term field experiences.

Changes in the Basic Liberal Arts Program

Those aspects of the basic general education program for elementary teachers that deal with the content to be taught in the elementary schools have undergone vital changes. Perhaps the most significant course change has been the development of a year-long sequence in the field of mathematics which attempts to overview the development of the number system, the various meanings that may be assigned to numbers and numeration, and attempts to develop a readiness on the part of future elementary teachers to deal with the "new mathematics." Similarly, learning activities in the areas of speech and drama have been designed toward giving future teachers a greater sense of stage presence, and a greater facility for effective use of oral communication in teaching. The music sequence has been modified to include both demonstration and participation in elementary classrooms located in the campus elementary school. The Art Department has organized a series of courses around the principles involved in effective art production and the relationship of those principles to the normal developmental pattern of elementary school children. These changes increase the effectiveness of the content courses in creating more insight and understanding of the subject and its relationship to children.

The General Studies Committee is currently involved in proposing changes in general education requirements from a fixed set of prescribed

courses to a more outcome-oriented definition. The most recent college catalog lists the following ten statements as indicative of a liberally educated person.

"The OCE student should strive to develop:

- the ability and self-discipline to learn independently in preparation for a lifetime of continuing study.
- the ability to communicate more effectively in both speech and writing.
- an acquaintance with thought and culture expressed through works of literature, music, and art.
- the capability for mature thought and judgment through knowledge of history, literature, religion, and philosophy.
- the ability to solve problems or to communicate with men or machines for problem solving using quantitative and non-quantitative mathematical systems.
- a fixed pattern of sustained physical and mental vigor through regular physical activity and through application of good mental and personal health practices.
- the capability for creative expression and aesthetic enjoyment through knowledge and experience in the creative and performing arts.
- a basic understanding of computer-based man-machine systems used in such fields as transportation, communication, health, and education, through knowledge of the physical and social sciences.
- the ability to deal with processes of human interaction, learning, and development as a parent, teacher, or other agent of social change, through knowledge of the natural and social sciences.
- the ability to deal with political, social, economic, and environmental problems and processes, through knowledge of the natural and social sciences."

The committee is developing a list of alternative courses and activities to be selected by each student in achieving these ten criteria. It is proposed that competency tests be developed, so that students who have achieved a satisfactory performance level in one or more of these areas will not be required to select prescribed learning activities. Advanced placement, based on established competencies, will have a much more meaningful part in the college program.

A number of courses are currently being changed from lab and lecture organization to a more individualized organization through modifications of the auto-tutorial approach. Involved in this change-over are the basic courses in biology, first aid and educational media and materials. It is believed that this mode of instruction will provide for more efficient and effective learning experiences, and that participation in a course with this greater flexibility of time and direct experience in learning will be more effective in teaching the prospective teacher about individualized instruction.

The Development of an Integrated Developmental Psychology Sequence

A basic required psychology sequence was re-organized into an integrated, year-long sequence with the inclusion of new types of learning activities. This was first initiated in 1959. In its present form, one quarter of the sequence is largely comprised of content presentations, including lectures and demonstrations, re-organized and focused more sharply in an effort to condense the content of the former courses. A second quarter of the sequence affords the student an opportunity to interact with fellow students under the leadership of a competent faculty member in a series of encounter groups, reading and lecture situations concerning various types of group interaction, and group roles. The other quarter is designed around field visitations and relational experiences, and subsequent discussions about the student's perceptions of these experiences. Students have an opportunity to visit culturally deprived areas, state hospitals, schools for blind, deaf, and similarly handicapped persons as well as visits to both urban and rural secondary and elementary schools. The psychology sequence is intended to increase a student's awareness of himself and aid him in his vocational choice. It is further felt that providing this type of curricular re-organization in the second year of the program may assist in avoiding an apparent loss of enthusiasm in teacher education students who have had few contacts with children after their initial choice to enter a teacher education program.

The Initiation of a New System of Student Advisement

The "new student advisement program" is another attempt at providing more individualized attention to students. The previous program consisted of a random assignment of 30-plus students to each member of the faculty whose function was to advise students of appropriate courses in a specified program, and to be available to counsel at the request of a student. Many faculty members were concerned over their competency to provide this counsel and saw the program as limited in effectiveness. The present program adopts the concept of advisement teams comprised of an interested faculty member assisted by at least two upper-division students majoring in the same field as the advisees. The fall registration period provides an opportunity for advisement teams and new students to meet together informally. The informal meetings allow advisors and students to come to know each other as people, as well as to provide

assistance to the student through registration. This program is viewed as a hopeful system of organization. With increased skill, experience, and in-service training it is anticipated that increasingly effective advisement teams will develop.

The Development of a Correlated Sequence in Professional Education

A fourth and perhaps most dramatic development in the elementary teacher education program was a junior year correlated professional sequence for elementary majors. This program, first developed in 1959, was recognized for distinguished achievement by AACTE in 1967. It may be described as follows and shows the incipient beginnings of a "ComField Model" philosophy at OCE:

"The first step in utilizing the theoretical framework for re-defining the role of the college instructors was to form the group of staff members assigned to the program into an instructional team. As they planned the objectives of the Junior Block program together, and shared materials and activities to implement these objectives, the model was used to clarify, modify, and define the meanings different team members assigned to terms, objectives, materials and activities. As the instructors observed each other teach, the model was used as a means of communicating and evaluating the effects of the teaching with the students. New and beginning college instructors utilized the model with experienced instructors to facilitate their induction into the program. An instructor who felt an inadequacy in one area utilized the model to increase his expertise by observing, or being observed by another instructor with more background and training in the area of felt need."

"The second step taken was to design a system of scheduled and voluntary individual conferences and small discussion groups in order to get to know the students and to increase the effectiveness of our work with them. Each instructor is assigned twenty-five Junior Block students and schedules a minimum of four to six individual conferences with each student. Weekly discussion groups are also scheduled. These conferences and groups are primarily used to assess and evaluate the progress of the student and to identify the next steps to take the needed input for implementing those steps."

"The third step was to correlate and interrelate the Junior Block Program to the student teacher and intern programs. Each instructor was assigned, as a part of their teaching in-load, five to ten student teachers and/or interns. The translation of the Block Program into the classroom setting of the student teacher was facilitated by the cycle of supervision utilized and the lesson plan format, each of which correspond to the theoretical framework. The pre-conference phase of the cycle is utilized by the college supervisor to have the student teacher identify those elements of

his situation, perceptions, and behaviors that affected the development of his intent and to specify, in terms of what the pupil will do or say, to indicate the level of mastery attained in regard to the learning task designed as a part of the lesson. Input at this point is designed to clarify and extend the meaning of the student teacher's intent and to provide alternatives if needed. The actions and effects of the lesson with the children are 'feedback' to the student teacher and, combined with his self-report, form the bases for developing the intent of the next lesson(s). Input in the form of alternatives at this point has more meaning because of the experience the student teacher has gained from the situation. The supervisor uses this opportunity to gain information as to the effectiveness of the Program to prepare the student for this step in the teacher education program and brings it back to the instructional team to study and evaluate."

"The fourth step was to relate the pre-service training program to the in-service program. This was facilitated by individual demonstrations and conferences held 'on-the-job' with the cooperating teacher and administrator. In addition, training programs, conferences, and meetings were held on campus to relate the program to the cooperating teachers and administrators, to train them in those aspects of the program that would improve their and the supervisor's effectiveness with student teachers and interns. In return, the cooperating teachers and administrators reported on the effectiveness of the teacher training program which was utilized by the college instructors in increasing the effectiveness of the program."

"It can be seen from the above activities that the college instructors' roles were re-defined by involving them in the complete continuum of the teacher education program (the program being viewed as not ending at any degree granting level)."

"Levels and Process of Staff Involvement"

Junior Block
Instructor

Student Teacher
Internship
Supervisor

Graduate
Courses
Instructor

Cooperating Teacher
and Administrator
Consultant/Instructor

Local & College
In-service Program
Consultant/Instructor

This means that each college instructor is involved with and responsible for developing the total product of the Teacher Education Program as an individual and as a member of a team.

The Development of Laboratory and Practicum Settings for Short and Long-Term Field Experiences

The Campus Elementary School has been basically involved in the exploration of various types of student participation demonstration, roles, and curricular alternatives during the developmental stages of the elementary program. The Campus School is located in the immediate area; it is staffed by competent elementary teachers and includes in its purpose the function of contributing to the improvement of teacher education. Since the primary administrative control of this school is located in the college, changes may be made in organizational and curricular structures in order to facilitate explorations necessary in the development of new programs. In cases where the changes appear to be effective, they might then be implemented in the participation-demonstration experiences of students in local school districts.

Approximately one-fourth of the current elementary majors take part in an internship program, developed in the period 1961-64. It should be clearly stated that this is not an MAT-type experience, but a student choice in lieu of student teaching. It involves a full-year assignment in a cooperating public school with the student receiving two-thirds of a beginning teacher's salary, student teaching credits, and organized seminars. The public schools and the college cooperatively provide supervisory staff for the program.

PART III

**THE CURRICULUM DESIGNED TO CARRY
THE PROPOSED ELEMENTARY TEACHER EDUCATION PROGRAM**

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CHAPTER 4

THE STRUCTURE OF THE PROGRAM

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The purpose of the chapter is to provide an overview of the three major phases of the program: the General Studies phase, the Clinical Studies phase and the Intern phase. It will be recalled that the General Studies phase has been defined operationally as that aspect of the program that does not involve responsibility for the learning of children; the Clinical Studies phase as that aspect of the program that involves responsibility for the learning of children under simplified (laboratory or simulated) conditions; and the Intern phase as that aspect of the program that involves supervised responsibility for the learning of children in fully operational, real-life educational settings. It will also be recalled that two levels of certification are provided in the program, an INITIAL certificate indicating readiness to assume an Internship and a CONTINUING certificate indicating readiness to assume full responsibility for the education of children. The structure of the program is shown schematically on page 19.

In reading the chapter, or for that matter, in reading all of the chapters in Part III, a distinction should be made between the logical ordering of the curriculum and its psychological ordering. As the program is described in the following pages it follows a well defined progression from simple to complex and from personal to professional demands. Such an ordering is necessary as a guide to understanding and program development. It does not describe the program from the student's point of view, however, as he moves through it. While program phases and certification levels provide the broad structure within which a student must function he tends to view the experiences to be encountered within them in terms of readiness, interest, learning preferences, idiosyncratic sequencing, and the like. While a logical order may be superimposed upon the program by those who design or describe it a psychological order dominates an individual's interaction with it.

The General Studies Phase of the Program

Function

There are two major purposes served by the General Studies phase of the program. The first, and perhaps most critical, is that of personal enrichment. This attends to the need for future elementary

teachers to have the subject matter preparation and the personal attitudes and capabilities which identify them as "educated persons." It is anticipated that at least half of the total curricular experiences encountered by students in the program will have personal enrichment as their primary aim.

The second purpose served by the General Studies phase of the program is that of professional orientation. Central to the realization of this purpose is contact with children in various settings and early contacts with public schools. Both are designed to enhance the student's ability to define his own professional role and to ascertain the relevance of much of his academic work to that definition. Efforts to develop professional competency in the General Studies phase of the program are minimal, though as pointed out earlier (see pp. 18-21), learning experiences focusing upon personal enrichment always contribute to professional development -- and vice versa.

Content

The major source of curricular experience in the General Studies phase of the program that aims toward personal enrichment will derive from established subject matter divisions within the college. The outcomes to be realized therefrom are described in Chapter 5. It is anticipated that these experiences will involve a diagnosis of the student's abilities, interests and limitations; the provision of alternative learning experiences in light of the diagnosis; an assessment of the effectiveness of those experiences in aiding the student in his educational growth; and the provision of additional experiences if those provided initially have not been adequate. It is further anticipated that students will engage in a process of negotiation in relation to personally enriching learning experiences. Finally, it is anticipated that a module or topical approach to personally enriching experiences will be provided, rather than the present procedure which enables courses to exist for arbitrary units of time. Underlying such an approach is the further assumption that as assessment becomes more focused on an individual student's abilities, interests, and the like prescriptions will be made in terms of these specifics. As a consequence, a much wider variety of experiences under a much wider variety of settings will be made available.

Curricular experiences that aim toward professional sensitization will be designed around students entering the real world of elementary education for various periods of time. The nature and content of these experiences will depend upon an assessment of the insights as well as the interests of the students in the program, but in general will involve actual on-site visits to various institutions and agencies available in the area. The purpose of such visits is to increase the student's awareness of that which occurs in various institutions, the type of professional demands made on people who work in those institutions, and the necessity for students to relate their own perceptions and feelings to those demands. Additional experiences involve the

student in the process of relating his capabilities and interests to existing demands.

Experiences aimed at the development of beginning professional competencies involve the interaction of the student with fully developed instructional systems (see pp. 26 to 31).

Entry Requirements

Since the General Studies phase of the program generally describes the first two years of college experience, entry requirements are essentially those required for entry into college. In the case of OCE there are established entrance requirements dealing with the high school diploma and reasonable high school performance. In addition, however, students who have performed poorly in high school or who have had limited opportunity to benefit from the college preparatory function of the typical high school are admitted on probationary status. In the case of students admitted under these somewhat hazardous circumstances the college has established a more intensive guidance and counseling program and a study center designed to diagnose and assist students in their academic work. Students cannot engage in professional orientation experiences, however, until they have been screened for such experiences by interview. The college cannot arbitrarily send students into public school classrooms and state institutions without at least some examination of the impact that each student is likely to have on those settings.

Estimated Time in Phase

As indicated previously, the General Studies phase of the program will involve approximately half of a student's total time in the program. It is assumed that this will for the most part be early in the student's academic career, and might be grossly described as the first two years of the student's experience in higher education. It is important to note, however, that there is no commitment to requiring completion of this phase of the program before entering either the Clinical or the Intern phases. The assumption of a healthy interaction between program phases has been central to all program planning.

Certification

At this time no formal certification procedure is seen as being needed for either entry into or exit from the General Studies phase of the program, though students employed as teacher aides for an extended period of time may need a more careful screening than that which has been described. There may even be some desirability in having a special certificate for "students in teacher education" who are serving as aides. Such a certificate would assure freedom from communicable disease and protection against persons seen as undesirable for children. Whether a formal certificate is issued or not, OCE is committed to the establishment of a system whereby such minimal screening does occur.

The Clinical Studies Phase of the Program

Function

The Clinical phase of the program is designed to assist the student in bridging between his function as a student and his perceived function as a teacher. While the General Studies phase aims toward students defining themselves as young adults, the Clinical phase is designed to assist the student in translating that perception into the role demands of education, into defining his teaching style as it grows out of his life style, and in integrating available knowledges, skills, sensitivities and feelings into an initial level of professional competency.

The Clinical phase of the program will further assist the student in making decisions about the specific settings in which he wishes to work. Students will be afforded opportunities to work with preschool, primary and/or intermediate children in a variety of social settings and in a variety of content areas. Before entry into the Intern phase of the program it is assumed that each student will be able to transact learning experiences on the basis of considerable information about his own professional role definition and his own personal preferences.

Content

The primary sources of content in the Clinical phase of the program derive from the areas of educational psychology, educational methodology, and related academic disciplines. In all cases such content will be offered in conjunction with real life and simulated experiences so that students can relate themselves "in settings" to the information and ideas being confronted. In addition the student will be offered essentially unlimited opportunity to synthesize that which he has learned. In so doing clinical supervision, interaction analysis, video tape feedback, and classroom simulation strategies will be brought into play. The commitment to enhancing the student's capacity for independent decision making demands more effective, more direct, and more realistic feedback systems. In the Clinical phase the student will be taught about the various feedback and monitoring modes as well as receive feedback from them relative to his own performance as a teacher under simplified conditions.

In combination these various kinds of experiences will be provided within the context of instructional systems designed to bring about specified professional competencies. As such, instructional systems provide learning contexts within which a student studies his own operation as well as the usefulness and validity of the knowledges, skills, perceptions and feelings that he possesses.

Another source of content will derive from intensive tests and interviews designed to enable the student to increase his capacity for self-definition and self-determination. Operationally this will

involve an exploration of the fit between interests, capacities and characteristics, and decisions about professional directions. The assumption underlying this aspect of the curriculum is that as self-definition and self-determination increase in clarity they will translate into an increased capacity to form effective decision making and the generation of self-direction in pupils.

Entry Requirements

Admission to the Clinical phase of the program requires a relatively intensive screening of students. The plan calls for an intake interview that will accomplish the following things: 1) documentation of a student's physical health; 2) documentation of his general academic ability; 3) documentation of his ability to use language in a public sense; and 4) documentation of his general character as perceived by faculty members, the dean's office, and other significant people in the student's life. In addition, documentation will be obtained as to vocational commitments and unusual problems or desires. On the basis of this assessment a student will or will not be issued a provisional certificate which enables him to function in a professional capacity in public schools.

Following the issuance of a provisional certificate, orientation is provided as to the content and process of the Clinical program and both long and short range "work contracts" are negotiated.

Exit Requirements

Prior to entering the Intern phase of the program students must demonstrate that they are competent to perform under simplified conditions the functions that will be demanded of them in the Intern setting. On first contact this statement, which is basic in the language of the proposed program, sounds more adamant and inclusive than the operations which derive from it in fact represent. For example, there are a number of competencies which cannot be reasonably assessed unless a student is with pupils over an extended period of time. The ability to bring about reading, writing and speaking skills are cases in point. There are also certain types of affective or attitudinal learnings which simply cannot be tested with limited numbers of students in contrived situations over short periods of time. In both instances assessment of the competency of students to bring about such outcomes requires going to the real world and being there for a period of time. Such is the function of the Internship. In general, however, the initial statement holds, for students must demonstrate, prior to exiting the Clinical phase of the program, that they not only have a coherent understanding of the content described previously but that they are able to combine this content functionally to perform tasks under simplified conditions that are representative of those they will encounter in the Intern phase of the program.

Estimated Time in Phase

It is estimated that the Clinical phase of the program will involve approximately 25 per cent of 12 to 18 months of the Student's higher education experience. It is not perceived as a year isolated either from the campus or from the personal enrichment component of the program, nor in any final sense from the Intern setting, but rather as a year in which the greatest emphasis will be upon relating person to vocational role.

Certification

Near the completion of the Clinical phase of the program, and prior to entrance into the Intern phase, students will be screened by a Certification Committee relative to receipt of a PRELIMINARY certificate.¹ If granted it means that they have satisfactorily demonstrated the competencies required for entry into the Internship and that they have arrived at clear vocational commitments. Certification will also mean that they have been legally designated as professional practitioners in the public school setting.

The Intern Phase of the Program

Function

The primary function of the Intern phase of the program is to consolidate and extend the competencies demonstrated in the Clinical phase. This requires their demonstration under a variety of conditions within the context of an ongoing educational setting. It also requires that some of the competencies demonstrated in the clinic be synthesized into "higher order" competencies and demonstrated under live classroom conditions. Finally, the Intern phase of the program provides a setting which allows realistic assessment of professional commitments -- including preferred contexts within which to work, preferred teaching style, feelings toward oneself as a professional person, and feelings about teaching as a vocation.

Early in the Intern phase learning experiences will be patterned after the learning experiences pursued in the Clinical phase. Bit teaching and working with individuals in small groups around rather specifically defined tasks will be characteristic. As time progresses, however, students will assume responsibility for the performance of all the functions of a teacher.

¹ The Certification Committee will be composed of a student's sponsor, clinical supervisor and a fellow student designated by the student being reviewed.

Throughout the Intern experience there is cycling and recycling through orienting, foundations, synthesizing and consolidating experiences. There is also recycling to content encountered previously in the General Studies or Clinical phases of the program. At no point in time within the program is a student denied an opportunity to engage in learning experiences desired or needed at that point in time.

Content

The Intern phase of the program centers in a public school setting. The placement by area, socio-economic level, and age of pupils is to be negotiated with each student upon entering the Intern program.

The primary focus of the internship has been described above. As such, it will involve work on both instructional management and instructional support competencies, including such competencies as out-of-class supervision, preparation of teaching materials, and the maintenance and utilization of effective staff and parent relationships. There will also be a focus upon the development of a philosophical posture in regard to the teaching profession and people within it, and a focus upon the development and rationalization of a teaching style that relates to philosophical commitment.

Entry Requirements

The exit requirements from the Clinical phase of the program in effect become the entry requirements for the Intern phase. As such, evidence will have to be available for some competencies that are non-negotiable, that is, some that are perceived as so basic that they simply must be accomplished by all who are to teach; some that are required as a function of the area(s) in which a student has chosen to teach; and some that are simply a reflection of a student's interest, ability or commitment. In addition, however, a student, that assumes the role of an intern must be hired (at 2/3 or 3/4 salary) by a public school district that is a member of the OCE Coalition. This will require the securing of employment through an interview and selection process typical of that employed by most institutions in placing graduates. In combination these requirements should afford a minimal guarantee of a student's capacity to function in an ongoing educational setting.

Exit Requirements

At the successful completion of the Intern phase of the program a student will be eligible to receive a CONTINUING certificate. The intent of this certificate is to indicate that a student has demonstrated all of the competencies requisite to effective performance in the school setting of his choice. As a consequence, exit requirements vary somewhat by student. The process by which such competencies will be assessed involves a formal review by a Certification Committee (involving public school personnel, college personnel, and college students). In addition, the

Committee will call for a formal review of the student's personal characteristics. Upon favorable action of this Committee, the CONTINUING certificate will be issued and the student will exit the program.

Estimated Time in Phase

It is estimated that this phase of the program will require approximately 25 percent or 12 to 18 months of the student's time in the program. It is further estimated that within this time period approximately two-thirds of a student's effort will be spent relating directly to children in a teaching-learning situation and one-third spent on re-cycling through General Studies and Clinical Studies activities, working in small groups in relation to the content of the Intern phase, and conferencing or interviewing with the sponsor and supervising teacher.

The Interaction of Program Phases

It is important that one not think of the various phases of the program as discrete or sharply differentiated entities. A student moves through the program with some early emphasis in General Studies, later emphasis in Clinical Studies, and finally a major emphasis on the Internship. However, the process by which a student identifies his professional role does not proceed according to this type of logical sequencing, but rather according to his own perceived needs and capabilities. As such, the particular sequence of learning experiences will be idiosyncratic and will be individually designed by the negotiation process discussed in Chapter 8.

CHAPTER 5

THE CONTENT OF THE GENERAL STUDIES PHASE OF THE PROGRAM

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The General Studies phase of the program includes experiences that:

- orient the student to the nature of the program, the alternatives available to him within it, the procedures available to him in selecting learning experiences according to needs, preferences and learning style, and the kinds of helping relationships to be established between himself and one or more sponsors;
- assess the student's entering competencies to determine placement, credit by waiver or examination, etc., and to determine the kinds of learning experiences that will be appropriate in light of interests, capabilities, and program requirements;
- extend and enhance the student's knowledges, skills, and sensitivities that contribute to his general and professional education objectives;
- enable the student to select the kind of educational setting in which he wishes to teach; and
- enable the student to perform the several instructional support competencies that are deemed prerequisite to entry into the Clinical Studies phase of the program.

In broad terms the General Studies phase of the program is designed to acquaint the student with the structure, content, and operation of the program as a whole; develop the knowledges, skills, and sensitivities that are assumed by program designers to be prerequisites to the performance of instructional management and support competencies; begin the identification of preferred educational settings; and develop the instructional support competencies needed to enter the Clinical phase of the program.

Objectives

The learning experiences found in this phase of the program derive from three sources: 1) the general education objectives that are held by the college for all students; 2) the professional education objectives established by the OCE coalition for students who wish to become elementary teachers; and 3) the assumptions held in regard to the rela-

relationship between self understanding and performance in relation to (1) and (2). The general education objectives that have been established by the college are listed on p. 70. The professional education objectives, with two exceptions, are still to be defined by the Coalition (see CHAPTER 9 for a discussion of how this is to be done), but the theory of influence behavior underlying the concepts of instructional management and support dictate the classes of knowledges, skills, and sensitivities needed as prerequisites to competency demonstration. These are summarized schematically in Figure 16. Examples of learning experiences that lead to the mastery of these various aspects of influence behavior appear in Appendix H.

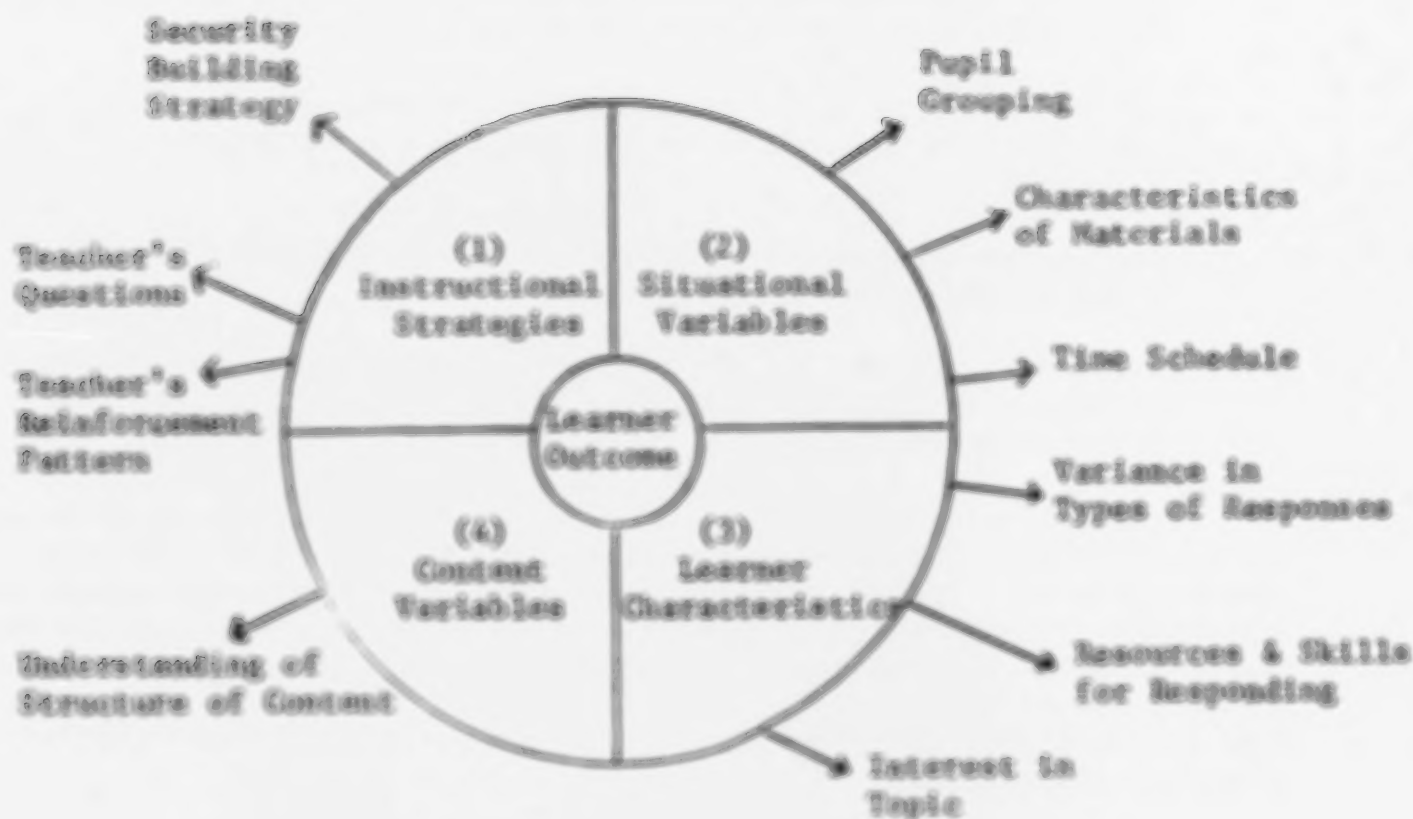


Figure 16. Dimensions of teaching behavior to be mastered as prerequisites to competency as an instructional manager.

The two instructional support competencies to be developed within the General Studies phase of the program deal with problem solving ability. One such competency involves the ability to solve problems related to teaching and learning. This includes skills and resources for: a) identifying problems, b) diagnosing problem situations, c) developing and considering action plans, d) testing plans, and e) evaluating data generated as a result of testing plans. The primary function of such a competency is that it maintains control for the student, or at least keeps control within his grasp. Another competency involves the understanding and use of team skills. This includes a knowledge and understanding of the techniques of listening, of constructive openness, of communication, of giving and receiving feedback, of discovering one's own process of working in groups, of diagnosing problems in groups, and of experimenting with behavior new in one's own repertoire. These competencies are seen as being sufficiently basic to operation within a school setting that their existence at some minimal level is required for entrance into the Clinical program. As with all other competencies they are then built upon in the Clinical and Intern settings.

Objectives relating to self understanding are limited in the General Studies phase of the program to an understanding of self within the context of the college environment generally and the environment of the ConField based teacher education program specifically.

Classes of Learning Experiences

There are four classes of learning experiences encountered in the General Studies phase of the program that derive from the objectives listed above: Self-Confrontation Experiences, Foundations Experiences, Professional Orientation Experiences, and Laboratory or Synthesizing Experiences (for a schematic representation of the proportion of time a student is likely to engage in these various classes of learning experiences see Figure 12, p 32).

Self-Confrontation Experiences

Self-Confrontation experiences in the General Studies phase are designed to enable the student to fit himself into the context of the college environment generally and the ConField environment specifically, and to prepare him for the self-confrontation experiences that will be encountered in the Clinical Studies phase of the program.

Self-confrontation experiences in relation to the total college experience are provided primarily by the Freshman Advising program (see pp. 71-72 for a description). The aim of that program is to help students understand themselves in light of that which they experience as they enter the college setting, establish increasing independence from family

and community of origin, find new friendships or establish new love relationships. Both the student's sponsor and the upper classmen who serve within the Freshman Advising Program at the college take part in this exploratory process.

A second set of experiences relating to self-confrontation that appears early in the program occurs around conferences between the student and potential sponsors. The aim of the conferences are two fold: 1) provide an orientation to the nature of the OCE elementary teacher education program, the role of the sponsor-student relationship within it, etc., and 2) come to understand one another as individuals so as to determine whether an appropriate sponsor-student fit could likely be struck. It is anticipated that such conferences would provide the foundation for the trust and respect that is necessary for a successful sponsor-student relationship. It is also anticipated that they would provide a basis for wise choice on the part of both sponsors and students. Sources of experiences at this level include:

- all manner of materials and procedures which introduce the student to the nature of the program, including student-sponsor role playing, video tapes of student-sponsor interactions, etc.;
- student-faculty retreats; and
- student-faculty activities of a social nature.

A third set of experiences that involve self-confrontation focus upon the identification of a student's learning style or preference in relation to representation mode (enactive, iconic, symbolic), general response set (gamblers, conservatives, successives), etc., while a fourth set focus upon a student's existing capabilities. Information that derives from these experiences provides the basis for beginning level planning about a program with a student.

Foundations Experiences

Foundations experiences have as their focus learning experiences which are presently found as lower division, general education course requirements, and the professional education courses related to child growth and development, learning and evaluation. The General Studies phase of the program emphasizes foundations experiences which relate to general education objectives.

The source of foundations experiences are subject matter disciplines of interdisciplinary themes. Learning experiences may range from the traditional course with large group lectures, papers, exams, conferences, small groups, audio-visual media, individual study, etc. to mini-courses, audio-tutorial programs, and seminars.

In going through the program it is anticipated that some students will utilize most of the foundations experiences provided and that others will engage with only a few. This may vary as a function of learning style or ability, or previous learning experiences, for example, a superior high school program or transfer from another institution of higher education. In thinking about students engaging in foundations experiences, it is important to remember that mastery of the knowledges, skills, and sensitivities intended to derive from them is not required in the usual sense. Criterion performance is required only of competence demonstration; not the knowledges, skills, etc. that are prerequisite to competence. As such, indicators of mastery that derive from the foundations experiences are viewed as means to ends rather than ends in themselves.

As a consequence, students may demonstrate competency without engaging in any foundations experiences or they may require a great deal of recycling through such experiences. The determiner in such matters is student preference and performance.

With such an orientation to instruction and learning it is obvious that no hard time lines can be attached to the General Studies phase of the program. Nor are there any firm criteria for moving from the General Studies to the Clinical phase of the program. General education objectives have no time line attached to them and with the exception of two instructional support competencies entrance into the Clinical phase of the program is without hard criteria. As a consequence only an approximation can be provided as to the time that is likely to be spent in the General Studies phase of the program. The best estimate is one to two years.

Professional Orientation Experiences

One function of professional orientation experiences is to provide students with first hand knowledge of the full range of professional roles that exist within education, and to provide him opportunities to make provisional tries at playing some of those roles. Another function is to provide the student with the image of a professional, including his ethics, rights, responsibilities, and the memberships available in professional organizations. Both are intended to provide a set of referents for students that will add meaning to didactic learning experiences and afford a basis for choice of education setting within which to work.

Sources of professional orientation experiences include visitations to various institutions and agencies that have as a portion of their function an educational mission, conferences and discussion groups with professionals in the field, and attendance at various professional meetings. Another source is part or full time employment as a clerical and/or teacher aide in an elementary school for a quarter. Service as

an aide will carry remuneration. Some examples of professional orientation experiences include:

- in conference a sponsor learns that a student does not know of the possibilities of being a teacher at the early childhood level. A visitation is arranged for the student to a nearby Headstart program. The student makes the visitation and discusses what he has observed with his sponsor. He may return if he desires additional visits and conferences.
- later the student may apply and be accepted as a clerical aide to the same situation, with pay, for a full quarter.
- after engaging in some foundations experiences related to early childhood growth and development, with special attention to cognitive (language) development, the student may elect to return as a teacher aide and work more directly with children.
- attending, forming, and assuming responsibilities in various professional organizations.
- visitations to P.T.A. and Parent Club meetings, school board meetings, school orientation nights, etc.

A seminar accompanying the professional orientation thread of the curriculum, and sponsor-student conferences, provide the means for reflective thinking about that which occurs within these experiences. As indicated elsewhere the professional orientation thread of the curriculum is the only aspect of the program that does not have systematic assessment procedures linked to it.

Outcomes expected to derive from professional orientation experiences at the General Studies level include a first approximation to the kind of teaching-learning situation preferred e.g., urban pre-school, migrant-rural at the intermediate grade level; concrete referents and "first-hand" information that will facilitate concept and performance learnings prerequisite to competency development; and a fairly clear perception of the meaning of "professional educator."

Professional Integration Experiences

At the General Studies level the professional integration thread of the curriculum is designed to serve two purposes: 1) an orientation to the concept and nature of professional integration experiences, and 2) a "first level" synthesis of the knowledges, skills, and sensitivities prerequisite to instructional problem solving and peer group interaction. It will be recalled that these are the two instructional support competencies that are required for entry into the Clinical phase of the program.

Key questions to be answered in regard to the orienting function of these experiences include: What kinds of laboratory settings are there, and how do they differ in purpose and operation? How are they arranged for, and by whom? What are the special protocols to be used while in the laboratory setting (dress, manner, etc.)? Who works with the student while he is in the laboratory? How is his performance assessed in the laboratory setting, and how is he informed about it? How does negotiation occur in the laboratory setting, and with whom? Some of these questions will be answered prior to involvement in synthesizing experiences and some during involvement in them.

The competence development function at the General Studies level is limited in both the number and kind of competencies to be developed and in the level at which they are to be developed. Only those competencies deemed essential to working within the Clinical setting are required, and these at only a minimal level of development. In the process of developing these competencies, however, students will engage in learning experiences that rest within "an instructional system" (see pp 25-31 for a description of all that this implies), and as such will be engaging in the kinds of learning experiences that will dominate the Clinical and Intern phases of the program.

The Interaction of Classes of Learning Experiences

At any given point during the school year a student will be engaging in one way or another in learning experiences that derive from all four threads of the curriculum. Foundations experiences, self-confrontation experiences, professional orientation experiences, and professional integration experiences will be pursued side by side. Moreover, a great deal of cross-over or interaction will occur between them. A student engaged in the practice of instructional problem solving in the laboratory, for example, (professional integration experiences at the synthesizing level) or in service as a teaching aide, (professional orientation experiences) will repeatedly draw upon the knowledge he has gained through foundations experiences of mathematics, or history, or the arts. Similarly, as concrete referents are provided through professional orientation or professional integration experiences as to the kinds of subject matter demands that are placed upon teachers of elementary school children, foundations experiences take on new meaning. The same kind of enriching or cross fertilizing effects occur in self-confrontation experiences: as laboratory or real-life situations are encountered, or as the subject matter of the humanities is encountered, new demands upon self awareness and self definition are made. As elsewhere, the reverse is true. The general position taken with respect to the interaction of learning experiences in the program is outlined on pp 18-21.

Some General Considerations

1. As discussed elsewhere (see pp 21-24 and 75-77) learning experiences in the General Studies phase of the program are not to be thought of as being synonymous with courses as they are typically known. Nor should the means used for transmitting information about performance in those experiences be thought of in terms of grade points and credit hours. While a credit hour-grade point language will have to be used at one level of description (one of two transcripts) to insure inter-institutional communication, these descriptors will be derived from a basic transcript made up of lower order descriptors that present performance data on general education criterion measures and the measures used to assess professional competency. The information contained in the basic transcript will be so much richer than that contained in the derived one that it is likely the basic document will replace the derived one in most negotiations about students. The strategies developed by the University of Massachusetts for reporting basic performance data and then translating it into a credit hour-grade point language will be taken as a point of departure in applying the concept in the proposed program.

A logical consequence of such an approach to the description of program performance is the description of requirements for the Baccalaureate Degree in elementary education in terms of indicators acceptable as evidence of the realization of the objectives of the general education program and the competencies required in the professional education program. As yet the college has not moved to such a position but the groundwork has been laid for it.

2. The student in the proposed program, in conjunction with his sponsor, is the one to define the specific learning experiences to be pursued and the specific sets of indicators to be used in judging mastery of general and professional education objectives. This is not to deny the responsibility of the college in specifying general and professional education objectives, nor to deny its responsibility in developing learning experiences that will facilitate a student's movement toward those objectives, but it does deny that anyone other than the student himself can structure a program so that it has optimal meaning and utility for him. It also denies that that which is taken from the program will be anything other than an approximation to that which is taken by others or that which others intend to be taken. Such a point of view suggests that an instructor's role within the program be properly perceived as the role of an "instructional manager" rather than one who "teaches" someone something.

CHAPTER 6

THE CONTENT OF THE CLINICAL STUDIES PHASE OF THE PROGRAM

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Introduction

The Clinical Studies phase of the program centers around realistic situations which enable a student to: a) observe varied educational operations; b) receive orientation to the competencies to be developed during the Clinical phase of the program; c) master the knowledges, skills and sensitivities that are prerequisite to professional competency; d) practice in synthesizing that which has been mastered at the foundations level; and e) demonstration of a level of synthesis that constitutes the criterion of competency required to enter the Intern phase of the program. In addition it provides a rich and powerful setting for self confrontation.

Two factors should be noted about the Clinical setting. First, the foundations experiences encountered in the setting are designed to bring the student into contact with much of the content ordinarily taught in educational psychology, educational methodology, and subject matter areas relating to the standard elementary curriculum. These experiences differ from the usual academic program, however, in that the content is taught as an integral part of the real and simulated experiences described in the first chapter. Thus, educational psychology becomes as situation-oriented as educational methodology. Two assumptions underlie such a strategy: a) realistic experiences will enable a student to see the relevance of content fields, and b) they will enable him to utilize the knowledge, skills and sensitivities which derive from these experiences with more of a mind set to the situational demands of classroom teaching.

A second factor to be noted about the Clinical Studies phase of the program is the integration of content and real life experiences. The assumption underlying the effort to make such integration is that it is critical to the process of personalization, that is, it better equips a student to select and use the ideas, skills and sensitivities that are most congruent with his learning style and his operational style in the classroom. It is also assumed that as a student studies teaching strategies or learning characteristics of pupils he is more

apt to see them in a functional and personal sense rather than as abstract descriptions relating to unknown people in unknown settings. Finally, it is assumed that such an approach to learning will significantly increase the student's motivation as well as assist him in being more efficient in selecting and rejecting that which is or is not applicable to him.

Foundations Experiences

Content from the Field of Educational Psychology

An examination of a standard educational psychology text usually will reveal a section dealing with the relationship of psychology to education, a description or several descriptions of the learning process, some summarizing statements about the characteristics of pupils -- including some stress on assessment -- and then an examination of the curriculum in terms of understanding, thinking, and communicating. Also, traditionally taught courses in the field tend to occur in the confines of a college classroom. As such they allow a student to be a passive, receptive, or at best a reactive learner, whereas the field in which he is to utilize the information being learned places him in the position of being in a much more active and visible social role. The contingency forces which act upon the student when he is in the public school setting are so different from those which act on him in the college setting that the assumption of a high degree of transfer is unrealistic.

Content from the Field of Educational Methodology

The assumption that a student will study educational methodology in a setting which is more real, more dynamic, and provides for an increased opportunity to make provisional tries of the information gained is similar to the assumption relating to educational psychology. The traditional organization of courses in methodology will be altered in an attempt to include real students and real content in a real setting.

In this connection the long-standing debate about the relation of theory to practice is viewed in the following manner. First, the power of most generalizations is reduced by the influence of the unique characteristics of teachers, learners, and content in specific settings. Second, it is as possible for a student to generate a theoretical framework. A basic assumption underlying the Clinical phase of the proposed program is that students vary in their orientation to the formulation and use of such frameworks. Some students will wish to formulate their theoretical framework with a great deal of clarity and then proceed to test and further shape it as they evolve their teaching style. Other students will prefer to begin with concrete teaching experiences and from these formulate for

themselves a series of abstractions or generalizations which might be called their theoretical framework. Through the process of interviewing and negotiation, it is anticipated that the Clinical phase of the program will provide for both modes of approach rather than being forced to the assumption that either mode is superior to the other.

Content from Related Fields

The development of the university approach to the definition of curriculum has led to increased specialization in academic areas. While this approach has been useful in the preparation of highly specialized teachers in academic areas, it runs counter in many respects to the informational demands of effective elementary teaching.

The depth, or narrowness, of certain advanced courses causes them to be quite irrelevant if they are designed on the basis that the student is becoming more proficient in the content to be taught in the elementary school. The student who will work in the elementary school typically needs broad and generalizable information about the nature of various academic fields, the assumptions made about the nature of thinking and knowledge in the field, and fundamental definitions of the types of human problems to which the field addresses itself.

The assumption in the Clinical phase of the proposed program is that the courses from academic areas most related to elementary teaching, for example, special courses in the fields of music, social science, art, mathematics and science, will be designed to provide optimum transfer potential for future teachers. These courses will be designed in a manner which enables the student to "get the feel of" the purposes, foci and mode of these subject areas rather than being designed to simply provide information about the fields.¹

Professional Orientation Experiences

The experiences begun during the General Studies phase of the program will be intensified through the Clinical Studies phase. At this level the professional orientation experiences have a number of purposes:

¹ It should be noted that such a point of view applies only to the vocational aim of the elementary major; it does not refer to learning experiences designed to achieve the objectives of general or liberal education. Much of the student's academic career will be spent in academic areas designed to enhance his capacity as a student and to assist him in the process of becoming an "educated person". The content described above is the professionally oriented content designed to assist the future elementary teacher in becoming knowledgeable about the academic areas which he will be responsible for conveying in the classroom.

- 1) assisting the student to decide if he is able to become sufficiently committed to teaching to continue in the program;
- 2) testing the student's perception of the role and purpose of the teacher against the perceived role in various educational settings;
- 3) assisting the student to select the age of pupils with whom he desires to work, the system of school and curriculum organization within which he works most comfortably, the academic areas or content in which he feels most competent, and the areas in which he feels he needs additional work; and
- 4) providing the student an opportunity to test his concept of a preferred teaching style against the various styles demonstrated in simulated and real settings.

Professional orientation experiences will be designed to make the student's involvement in real classrooms as unobtrusive as possible. It is not assumed that the student will be actively involved in long-range teaching experiences in this component of the program.

Professional orientation experiences require at least two elements: a) when the experience involves entrance into an established classroom, the institution must attend, at a minimal level at least, to the personal characteristics of the student involved (the professional responsibility of the institution is to avoid placing unhealthy or otherwise disruptive college students in public school classrooms); and b) the student must have a reasonably clear objective for involvement in the setting in order to have some hope of assessment and decision making following the involvement. Further, the student's capacity to benefit from the experience will be greatly enhanced if he has reasonable clarity about his purpose in taking part in the first place.

Professional Integration Experiences

A large percentage of the descriptions of instructional systems for the development of competencies call for practice and demonstration of a criterion teaching performance with real students. Other instructional systems call for the demonstration of criterion performance in instructional support tasks that involve real peers, or real parents or real administrators. The distinguishing feature of competence demonstration in the clinical setting, however, is the requirement that it occur under simplified conditions. The learning experiences designed to bring about this level of competency have been labeled as synthesizing experiences.

Operationally synthesizing experiences provide an opportunity for a prospective teacher to practice the combination or integration of two

or more of the elements involved in the teaching act under simplified conditions. As such, practice is provided through case studies, note playing, mediated classroom simulators, micro teaching, bit teaching and the like. The critical feature of all practice situations, however, is the opportunity for a student to monitor his own performance as a prospective teacher. A variety of procedures will be used for this purpose:

- 1) classroom interaction analysis;
- 2) interaction with supervisors and sponsors utilizing some content from the field of clinical supervision;
- 3) regular and frequent use of portable video-tape machines;
- 4) an analysis of the level and type of question and information utilized;
- 5) verbatim feedback from other students assigned to the same setting;
- 6) the utilization of reaction assessment from the pupils involved.

In addition to essentially unlimited opportunities to practice the integration and application of elements of the teaching act each student has the opportunity to experience small groups of adults (peers, peers and staff, others) for portions of his time throughout the instructional program. Peer group meetings serve a variety of functions, for example, general discussions and comparisons of ideas can lead to crystalization of one's values and to increased awareness of differences in perceptions and group task assignments can aid students in becoming contributing group members. The focus of these peer group meetings is on the student's experiences with groups of children, with simulated events, and with related reading. Adult group meetings take the form of teacher groups, parent groups, teacher parent conferences, and policy groups (such as school boards, scout councils, etc.). Students have opportunities to experience such meetings in a variety of roles: as a non-participating observer, as an observer who participates upon the request of the group members, as an assistant to a group member with leadership responsibilities, or as an initiator and leader of a meeting (e.g., a parent conference, a team teacher meeting).

Students have opportunities to observe and/or participate with pupils through working with a field based clinical supervisor one day per week. Clinical supervisors and students are matched on the basis of a supervisor's ability to accommodate the special needs and strengths of a particular student.

The student is linked to a clinician rather than a classroom in order to give greater flexibility to the types of settings available for synthesizing experiences. For example, the clinician could be a member

of a teaching team, a specialist providing services outside a regular teaching team, a specialist providing services outside regular classroom groups (therapy, counseling, advanced academic experiences, social and health services, etc.), or a teacher in a self-contained classroom. In this way abundant performance opportunities are provided for the student and the atmosphere tends to encourage the student to initiate activities that relate to his specific interests, needs and strengths.

A student is obligated to work with more than one clinician during the Clinical phase of the program in order to extend his experience in working with different kinds of adults and pupils.

School districts may differ in their capability to implement the Clinical phase of the program, so participation in the program should not be determined by a rigid definition of a clinical setting. A variety of alternative arrangements may be developed to accommodate these differences. At the present time, however, it would seem that a "preferred" setting would have a clinician carry major responsibility for a set of pupils and in addition carry responsibility for 12 to 15 students observing and/or participating in his program once a week. One half of the supervisor's time would be free to devote to the supervision process. The following paragraphs spell out what such a plan would mean for clinicians, students, sponsors, pupils:

The clinician maintains responsibility for the conduct of a quality program for pupils and assumes responsibility for making necessary alterations in that program to allow students to observe and/or participate under supervision. In addition to performing the tasks required by these two responsibilities, the clinician must be available for weekly meetings with the students and their sponsors. Instructional assistants are added to the clinical setting to aid in both the program for pupils and the provision of feedback to teachers in training.

The student plans his clinical experiences with both his sponsor and his clinical supervisor. Some feedback about his experiences will come from his clinical supervisor, some from his sponsor and some from the instructional assistants who help observe and record his experiences.

The sponsor is involved in detailed planning and evaluation with each student concerning his clinical experiences. The sponsor, with the clinical supervisor, must also observe and record information pertaining to the student's performance on criterion measures. The sponsor must also obtain constant feedback from performance in clinical experiences and translate it into the modification and addition of either foundation or synthesizing experiences.

The pupils are to be involved in a quality education program that is not threatened by inconsistency of teachers or overloading with prospective teachers.

Self-Confrontation Experiences

The self-confrontation process consists of a series of tests administered to students and interpreted in a series of individual interviews designed for that specific purpose. While a number of outcomes may be derived from this component of the program its most basic purpose is to facilitate the process by which students come directly in confrontation with their own abilities, inabilities, commitments, non-commitments and beliefs.

The initial test, which should be timed to coincide with early clinical experiences, is the classroom simulation test. The test consists of a series of filmed episodes to which the student responds either by agreeing or disagreeing with objective statements about the episodes or a more open form entitled the "projective" form. It is designed to highlight certain personality traits or behavioral tendencies on the part of the student. The scoring is designed to produce a descriptive profile with high-low measures on such traits as trust, aggression, control, self-confidence, need for order, etc. While the prime purpose of the test is to provide a form of self-confrontation based fairly well in the context of teaching, it further serves to make clear to the student that the test and interview is not designed to condemn or accept student behavior, nor is it designed to screen students who enter the program. It is designed as a means of assisting the student in seeing himself. In this sense it is an orienting experience and becomes the basis for the student to negotiate either continuance in the program or withdrawal from the program at this stage. Those students who elect to go on will then have a series of further experiences designed in the same manner but with different tests and different content.

The second test recommended is the "16 PF".¹ This test is designed to measure on a normative basis 16 factors assumed to be fairly fundamental in human personality. It is a paper and pencil test approximately 35 minutes in length and seen by the test-makers as well as by students as a relatively mild and non-threatening instrument. In addition to assisting the student in arriving at terms or labels for various personality traits it further furnishes an objective frame of reference by which the student is able to relate his traits to those of his peer group. The interview, in addition to making scores clear and available to the student, will afford an opportunity in some settings for students to begin to face up to the types of behavioral changes seen as important to them and relevant to their chosen profession.

¹ 16 PF. Champaign, Illinois: Institute for Personality and Ability Testing, 1962.

An additional test recommended is the Edwards Personal Preference Schedule.¹ This test is designed to measure the relative power of a wide range of manifest psychological needs. It is described as relatively non-threatening and useful even for group testing by the test makers. The OCE experience with the test, however, suggests that it is more threatening than the 16 PF test described previously. It does afford an alternative interpretation from the 16 PF and enables students to examine themselves in a similar but to some degree different light.

Another test in its initial stage of development is designed to assist the student in defining his preferred learning style. Such a test will focus on preferred information sources, types of information, learning context, authority figures or authority sources, and style of control, freedom, variety, variation, and time.

A test of philosophical commitment which has been in existence for a few years at Oregon College of Education (but in no way normed or evaluated) might be used as the basis for an additional series of conferences or interviews. The test is designed to force students to rank four possible statements in terms of "most acceptable" to "least acceptable" and produces a philosophical profile of relative agreement on the part of the student. The results tend typically to show some level of agreement with all philosophical fields but usually with one or two being preferred over the others. The interview and discussion tends to focus around the area of life in which he tends to be most conservative. The discussion can also serve as a vehicle by which the student begins to examine his own philosophical commitments toward the process of education.

Another instrument currently in use at Oregon College of Education is entitled "A Test of Values". The test consists of a brief descriptive statement of a pupil who has violated a social norm and then furnishes a series of alternative starting places by which a teacher might open a conversation with the child about his misbehavior. The values for a number of approaches are exemplified by four alternative responses for each problem situation presented in the test. The scoring provides a descriptive profile which shows whether a prospective teacher is committed to a punitive or judgmental approach to a child's misbehavior, or whether he is more committed to a supportive or analytical approach. The test affords a frame of reference by which a student could be assisted in monitoring his response to the perceived misbehavior and can assist him in understanding why his behavior can, and very likely will, be modified as a result of his teacher education experience.

¹ Edwards Personal Preference Schedule. New York: The Psychological Corporation, 1959.

Certain assumptions are inherent in the design of this entire process. The assumptions deal with the basic commitment of the faculty member and student involved in the entire activity labelled the "personalization" of the program. The essence of the tests and interviews and interpretation is best described by the following assumptions:

1. The students and faculty members are jointly committed to making clear to the student his own approaches, his own beliefs, his own weaknesses. The faculty member is not in a position of either approving or disapproving the student's commitments or ideas. His function might be best described by the term "mirroring."
2. Both power and knowledge are shared jointly by the faculty member and the student in the conferences. The information suggested by the test results are available to both people and the means by which questions are translated into descriptive profile should be made clear to the student so that he understands the strengths as well as the limits of the various test results. The student brings to the interview his own direct experience with his own life as well as his own feelings about this. The faculty member can be assumed to have a broader range of experience and to some degree a greater awareness of the normative statements that might be made about the student. The concept is that the interview affords a sharing and contrasting of the views without any requisite necessity for agreement.
3. Case studies of the students is not a function of the interviews. The purpose of this component of the program is to assist the student in making his own personal definitions and is not in any way to be used as a part of his academic record. The assumption is that unless this is clear to the student it will tend to limit the openness and honesty which is requisite to any effective outcomes of the testing and interviewing.
4. The general approach represents probably a "perceptual psychology" approach to self definition. It assumes that the student has the capacity to change his behavior, that the basic causes of his behavior are existent and present and therefore available for alteration or control depending upon the student's choice. It further assumes that the process by which personal competency is translated into teaching behavior is a more hopeful process than that by which personal powers and approaches are altered to comply with a pre-existent "affective" system for dealing with children.

It is further assumed that the specific approach used in the interviews will grow out of the personal commitments and feelings of both the faculty member and the student involved. In some cases the focus is apt to be fairly specific on the vocational implications and application

of the information dealt with. In other cases the focus will be more upon the student as a person in his own right and with his feelings and perceptions about himself as a human being. The essence of the experience is defined by the earlier statements about the general, open, accepting and honest approach rather than by a specific definition of what either the content or the focus of the actual interview should be.

The evidence so far indicates rather dramatic outcomes as a result of this type of effort at Oregon College of Education, but the results do not reflect a commitment to either a personal or professional approach. Still to be tested is the question of how the content, the process, and the personalities of the interviewers are put together in the most productive manner.

The Interaction of Learning Experiences in the Clinical Phase of the Program

Students' performance in a given setting demands the integration of various phases in the program. An example of how this process takes place can be demonstrated by stating an objective of the program and then proceeding to an analysis of the implications of that objective for the learning experiences devised for students.

Program Objective: Teachers will interact with pupils in a manner which conveys regard for the dignity and worth of each pupil.

The assumption underlying this objective is that teachers will interact in a manner which conveys regard for the dignity of each pupil to the extent that teachers do in fact feel regard for the dignity of pupils. In the context of the proposed program this is the only coherent interpretation that could be given to such an objective. To read it as though the program were to indoctrinate certain prescribed forms of interaction with children as being proper or desired is contrary to the concept of autonomy, freedom, or individuality. This does not change the form of the objective but rather changes dramatically the implication of that objective for curriculum development. Five "consequences" for curriculum development will be explored.

1. The first area to be examined would be that of the personality of the future teacher. Some people have a very limited capacity to regard others in a positive light. This, in some cases, represents projecting an inadequate self concept onto the people with whom one is dealing. If so, a first task would be to confront the feelings of inadequacy present in the future teacher.
2. To hold another in positive regard suggests that the performance of the other person is to some degree congruent with the perceiver's expectancy. This says that teachers then need a great deal of insight about the interests, capacities

and needs of each of the pupils with which they deal. Teachers need to understand as accurately as possible the basis upon which learning occurs and the relative permanence of individual differences in both rate and capacity. A second application of the principle is in the area of motivation. A great many serious students tend to see themselves as either lackadaisical or lazy, or at least spot themselves with a tendency to procrastinate. They will encounter learners who are apparently not interested in getting by with a very minimal performance. If they then see the students as lazy, this perception certainly leads to a diminishing of their regard for the student. They need to learn a more fundamental means of seeing and analyzing children's behavior in order to arrive at more productive approaches to them.

3. Future teachers can be aided in their tendency to accept students by an increased awareness of some of the findings in the field of sociology. They especially need to be aware of the different norms that are established in social sub-groups. They need to be aware of the different meanings that are given to words, to different styles of language that exist and to different values that are attached to behavior by the sub-groups. A specific example is that they need to understand the general disregard or disrespect for authority which is typical in some social sub-groups, and interestingly enough becoming more typical of our entire culture.
4. Whether the philosophical position of the future teacher is approached directly in learning experiences, or allowed to sift out of the great range of other experiences, the premise still stands that the student must be clear in his own mind about his philosophical commitments about teaching and about the fit between his philosophy and the "real" world into which he is expecting to move. Since teachers typically come from a fairly selected portion of the population their philosophies may, to some degree, be congruent with each other. On the other hand, since teachers must interact with students from all walks of life for 16 to 18 years some frustrating differences between pupils' commitments, beliefs, and values and those of teachers are inevitable. The issue is not one of whether the school should accept the youngsters' values or try to change them. The issue, rather, is to develop a sense of appreciation for the presence of differing values. If this is not a part of a direct learning experience, it certainly must be linked indirectly to a wide variety of other experiences students will encounter in the program.

5. There are a great many forces in the public schools which act upon the student in the Clinical setting. Some of the forces will tend to interfere with the student's tendency to regard the pupil in a positive light. Pupils sometimes embarrass teachers publicly. Some teachers tend to blame other teachers for youngsters' failures. Some parents blame their children's limits on their teachers and some are even known to say, "My child never acted like that until he got you for a teacher." At the same time, some administrators expect a great deal more order than can be achieved in the classroom. Some administrators expect all youngsters to achieve grade level performance, no matter how arbitrarily defined, and some school boards expect a high quality professional performance in a relatively barren setting. Insofar as the setting is incongruous or incoherent, the teacher or student in training will be buffeted between the demands of the setting and his commitments to himself. This point talks more loudly for a highly organized and sensitive process of supervision and assistance in the Clinical setting than it does to earlier readiness experiences. If there is any earlier readiness experience to equip a student to live in a setting, it would probably be the development of clear, fundamental concepts about his beliefs, commitments, awarenesses, information and capacity.

The OCE Coalition is committed to the point of view that the final assessment of the capacity of the student to interact with pupils in a manner which conveys regard for their dignity and worth will be made in the Intern phase of the program. There is also commitment, however, to the assessment of this competency if at all possible before the student enters his internship. This poses the problem of whether such a competency can be assessed at an earlier phase of the student's training. The issue is a complex one, and one which characterizes competence assessment generally, namely, the generalizability of competencies from simple to complex settings, or from one simple or complex setting to another. It is not hard, for example, to love a child so long as one is not vulnerable to his misbehavior. It is also not hard to love children when with them for short periods of time, or in small groups. It is harder to love them in large groups after long periods of exposure. In this sense, it is likely that an assessment of a student's regard for children when exposed to them in a Clinical context will not be particularly representative of his regard for them under different circumstances.

One solution to the problem lies in a negative consideration, that is, given no evidence to the contrary, the assumption is made that the student is progressing in a positive fashion. But what of a learning situation in which the student relates to a pupil or pupils in a hostile, aggressive, or otherwise unpleasant manner? What inference should be drawn from such behavior about regard for pupil dignity and worth? The answer has to depend upon the circumstance. If a beginning

teacher makes an inappropriate assignment and, as a result of the assignment creates turmoil in the classroom, he then must manage that turmoil in some manner. Many beginning teachers will handle it with power and punitiveness, but not because the children are bad, or the teacher is bad, but because the situation is bad. Within such a framework it may be that professional commitment and regard for students says the bad situation must be terminated and replaced with a better situation.

If narrow and specific indicators of competency are specified, or if the power of situations are ignored, there is danger that a great deal of evidence that grows out of a positive professional commitment and a positive regard for students will be ignored. Also, if a student's "defensive" behavior can be ignored then perhaps a growth in his awareness and understanding of his own behavior could be acceptable as evidence of progress toward the competency desired. If excessively defensive reactions or false rationalizations of the behavior are encountered, however, it could be taken as evidence that the student is not progressing toward the desired objective -- even in the clinical setting. In a sense it is unfortunate that the assessment of competence is so "non-specifiable" in advance; in another sense, however, the recognition of this fact is one of the more encouraging features of the proposed program for it works toward keeping a high regard for the integrity of the individual in his situation paramount.

CHAPTER 7

THE CONTENT OF THE INTERN PHASE OF THE PROGRAM

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The Intern phase of the program is designed to provide learning experiences that lead to and settings within which to demonstrate competency under real-life teaching conditions. This is the case for both instructional management competencies (the realization of desired pupil outcomes) and instructional support competencies.¹ It also provides opportunity for students to develop skill in diagnosing their own successes and/or failures, prescribing alternative strategies for themselves if they have failed, and to integrate all that they have learned into an idiosyncratic teaching style.

The Intern phase of the program, as all other phases of the program, is cooperatively designed, developed and operated by public school personnel, college and Teaching Research personnel, and students in the program. As such it is relatively specific to the coalition of institutions and agencies that has designed it.

The Setting For The Intern Experience

The Intern phase of the program operates in the public school setting, with student learning under the direct supervision of a field based clinical teacher or supervisor. The clinician works cooperatively with the college supervisor (sponsor) relative to competencies to be developed and in assessing performance relative to competency demonstration. Operations in the Intern setting are directed by the school principal and supervisors from both the public school and the college.

¹ Many instructional support competencies are encountered only in the Intern phase of the program. There are two reasons for withholding the development of some competencies until this time: 1) it provides for a manageable distribution of competency development efforts across time, and 2) as Interns, students encounter settings which facilitate the development of some competencies, for example, instructional materials development or parent conferencing, which they cannot encounter easily in the Clinical phase of the program.

Teachers serving as clinical supervisors for the internship will have demonstrated the competencies required to function as a clinical supervisor, i.e., they will have demonstrated that they can in fact supervise learning experiences that lead to the development of competencies on the part of students in the internship. In-service training programs will be provided during the course of the implementation effort that will lead to these competencies (see the Staff Selection and Development mechanism in Chapter 10). As currently planned, a clinical supervisor in the Intern phase of the program will devote half of his time to the instruction of pupils and half to the supervision of students. Each supervisor is to have five interns.¹ Training for clinical supervisors will compare favorably to that of elementary school supervisors.

There are at least two kinds of settings within which internships are practiced. Each setting requires a somewhat different organization of personnel and operation:

- 1) Settings located close to the college campus. Students in these settings will probably live on campus and maintain a great deal of contact with the college. In this setting seminar activities could be conducted either on campus or at the school.
- 2) Settings located in schools that are a considerable distance from the campus. In these settings students will live off campus and their contact with sponsors will be less frequent. In this setting most seminar activities will be held at the school.

In addition to the provision of opportunities for instruction and assessment, all intern settings must provide opportunities for planning seminars and conferences between the student, the supervisor, and the college sponsor.

Entering the Intern Experience

Application for entrance to the Intern phase of the program rests upon the progress of a student within the Clinical phase of the program. Progress in the Clinical phase rests upon the mastery and synthesis of the knowledges, skills and sensitivities needed as prerequisites to the competencies that are to be demonstrated as an Intern. When it has

¹ Cooperating school districts will include in their budgets the salaries of clinical supervisors in the Internship phase of the program; the college will include in its budget salaries of field supervision in the Clinical phase of the program (see the Instructional Operations mechanism, Chapter 9).

been demonstrated that adequate syntheses have been made (see Chapter 4) a student applies for INITIAL certification. This requires a formal review of his over-all performance record by a review committee, the collection of recommendations for service as an Intern, and formal acceptance by a school district as an Intern. The latter is critical in that the Intern will be receiving a salary from the district and is to function as a staff member of the district. Upon approval by his review committee he becomes eligible to begin interviews with school district personnel. It is up to the student to negotiate an internship that will be conducive to competence development in his field of interest.

The Internship Experience

The Intern phase of the program provides opportunity for a broad range of experiences. It allows students to engage in foundation and synthesizing experiences if needed to better demonstrate a given competency or to develop a competency first encountered in the intern setting; it provides consolidating experiences for all competencies; and it provides for service in alternative institutional arrangements, for example, in schools that have self-contained classrooms, non-graded classrooms, team teaching, individualized instruction, etc.

All experiences in the Intern phase of the program, whether aimed at the development of instructional management or instructional support competencies, carry a second purpose, namely, the development of self-analytic, self-directing teachers. All Intern students face continuous analysis of self-as-teacher. In addition, several instructional support competencies contribute directly to the development of these qualities. One such competency involves the ability to solve problems related to teaching and learning. This includes skills and resources for 1) identifying problems, 2) diagnosing problem situations, 3) developing and considering action plans, 4) testing plans, and 5) evaluating data generated as a result of testing plans. This primary function of such a competency is that it maintains control for the student, or at least keeps control within his grasp. Another competency involves the understanding and use of team skills. This includes a knowledge and understanding of the techniques of listening, of constructive openness, of communication, of giving and receiving feedback, of discovering one's own process of working in groups, of diagnosing problems in groups, and of experimenting with behavior new in one's own repertoire. While these particular competencies appear early in the program (they are the only two to appear in the General Studies phase), and students are held accountable for them in the Clinical phase of the program, they continue in a central role in the Internship.

Supervision and Assessment of Interns

A cooperative approach to the supervision and assessment of competency in the Internship is pursued. Both college and school district personnel are involved in the assessment process, as is the student being assessed (see Chapter 1 for a description of the negotiation procedure that leads to the fixing of the specific situation within which competency is to be demonstrated, the specific indicators that are to be used in that situation in assessing competency, and the specific measurement procedures to be used in obtaining those indicators). As a consequence all must share the same purposes for the internship and all must be clear about the responsibilities of each other in carrying them out. They must also share in understanding and the utilization of common procedures.

Although supervisory and assessment procedures of the kind needed in the proposed program may be difficult to share and utilize, they in essence involve a procedure in which all parties involved develop the fullest possible understanding of the goals each holds for instruction, by exchanging full information about those goals, and then negotiating out of such a mix that which is agreeable to all. The degree to which information is shared about goals will affect all levels of instruction and assessment. This kind of sharing can best be done in face to face planning sessions where the purposes are to understand the cognitive and affective levels of all parties who are concerned with the task at hand.

Assuming that the parties involved have shared goals and understandings about the competencies to be demonstrated, the situations in which they are to be demonstrated, the indicators acceptable as evidence of competency in those situations and the measures to be used in obtaining the agreed to indicators, it becomes possible to gather performance data which are relevant and meaningful in an assessment program. Feedback of such data provides the intern with information about pupil or parent or peer outcomes, and how well his performance matched his expressed intentions. This kind of assessment-feedback procedure provides both a basis for learning and/or change and the means by which criterion performance may be assessed in an objective and realistic manner.

Self-Confrontation for Interns

The specifics of performance data shared between sponsor, clinician, and intern provide the basis for self-confrontation in the intern experience. Such data provide one avenue for an intern to determine whether his performance matches his intentions as a teacher. It also provides a basis for determining whether his perception of his behavior, and the perception of others who view his behavior, are comparable. To be confronted with the fact that they are different is a confrontation of no small proportion.

Of perhaps greatest importance is the opportunity such data provide for determining the effects of one's own behavior on pupils. The realization that one's behavior leads to movement toward or away from a goal which is desired for pupils provides confrontation with the central reality with which teachers must deal.

From such confrontations an intern has a basis for modifying his actions or his goals with reference to the situation in which he is teaching. He also has an opportunity to determine whether he can in fact accomplish desired outcomes with pupils and still perform in ways consistent with his own self-image. Such determinations by the intern, within the constraints of satisfying certain pupil outcomes, are critical to the development of a preferred and defensible style of teaching.

Inherent in the self-confrontation experiences in the internship is the opportunity to try new behaviors which an intern at first may feel are inconsistent with his "personal style" or his "self in operation." An opportunity for provisional trys with new approaches to interaction pave the way for personally satisfying changes on the part of an intern. The sensible and realistic feature of thinking about such change is that the changes made are controlled by the intern and his own perceptions of the elements in the situation which he can manage.

The Interaction of Learning Experiences in the Internship

An intern will move back and forth between consolidating experiences, foundation experiences, self-confrontation experiences, professional orientation experiences, and professional initiation experiences. This kind of movement will be determined in part by the competencies being worked upon, in part by the results of assessment and in part by the goals and desires which an intern sets for himself. This kind of movement is necessary to the success of the Intern phase of the program if a student is expected to develop a rationale for new teaching methodology or further define his own teaching style by supporting it with a theory base. Such an approach is also consistent with the notion that teaching practice must continually be updated by reference to developments which are occurring both in and out of the field at a rapidly increasing rate.

CHAPTER 8

CURRICULUM RELATED ISSUES: PERSONALIZATION AND AFFECT

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The Process of Personalization

In light of that which has been described in the preceding chapters it is clear that transition from the General Studies to the Clinical Studies phase of the program does not occur in a rigid or time bound manner. Nor does transition from the Clinical to the Intern phase of the program, though in this case the criteria for moving from one to the other are more firmly defined and vigorously held to. Across all phases, however, an effort is made to personalize the program. The following principles guide the personalization process:

1. All learning experiences are to be as relevant as possible to the needs and interests of individual students. In this regard
 - a variety of experiences need to be available that will lead to the realization of a given outcome;
 - each experience needs to have multiple entry points and multiple routes for progression through it;
 - the specific experiences pursued, the pacing of progress through them, and the specific criteria for assessing outcomes that derive from them are to be determined through a process of negotiation between a student and member of the faculty;
 - negotiations shall be carried out within a framework of equality;
 - provision shall be made so that both students and faculty come to know their own strengths, weaknesses, preferences, and role responsibilities so that each can sensitively and effectively carry out his responsibility in the negotiation process;
 - the program as a whole has to be sufficiently flexible as to permit relatively free movement between learning experiences designed for the various phases of the program, and some degree of freedom in movement across phases.

2. Honest, forthright and non-judgmental feedback about performance must be furnished throughout the program. In this regard
 - a sensitive and thorough diagnosis must be made when students are seen as failing in the program;
 - feedback must reflect to the degree possible a consensus view (the democratic ethic will not be sacrificed to a more authoritarian one).
3. A high degree of social responsiveness needs to characterize all that transpires within the program. In this regard
 - the curriculum must face the existent conditions of alienation, loneliness and superficiality that pervades the current social system;
 - human behavior needs to be viewed with compassion and understanding, even in cases where it is non-productive or antagonistic.
4. Students who can accomplish specified outcomes in working with children must be assessed as competent, even though their approach or style may be quite out of harmony with usual practices.

One cannot discuss personalization without dealing with the problem of people's perceptions. Two people viewing academic material or a particular learning situation or a particular instance of behavior are going to view it differently. Furthermore, if they are to have a meaningful interaction around that which they are viewing, their perceptions cannot be too divergent. In the proposed program, where an effort is made to maximize individual differences and movement is dependent upon negotiation, this is especially critical. Considerable care if given, therefore, to see that the perceptions of students and sponsors are sufficiently compatible that the work of the planning-negotiating-assessing process does not break down. This is accomplished primarily by providing for close contact between a sponsor and a student from the beginning to completion of the program. In this way both can come to know each other as human beings with needs and goals and pressures, and hopefully come to see the meaning and significance of events for each other. Out of such a relationship trust and respect and sensitivity to the circumstance of one another can hopefully grow. Without such qualities it is likely that that which has been envisioned for the program will not occur.

Dealing with Affect

Perhaps the most critical area in need of attention in designing curriculum for future preschool and elementary teachers is that which is commonly called the "affective domain." Educators are not at all

clear about the content of such an area, how it differs from or interacts with that which has been called cognitive, etc., but they are convinced that something called feeling, value, attitude, and commitment are important ingredients in a teacher education program, and that any program purporting to be systematic in its treatment of the educative process has to attend to it.

In the proposed program "affect" refers primarily to the feeling qualities that accompany action. In this sense affect may refer to joy, pleasure, hostility, anger, dread, commitment, etc. They may or may not be related to attitudes, values, and beliefs; they are strongly tied to situations; they appear in both teachers and pupils; they interact with knowledge and/or skill to influence action; when strong they tend to bring about like reactions to others; and when very strong they tend to dominate action. As such, they cannot be ignored -- in either the process of educating teachers or pupils.

A basic assumption underlying the program is that a curriculum designed purely around cognitive matters would have extremely limited transfer value and would leave students essentially unprepared to handle the reality demands of real-life educational settings.

A number of problems are encountered when attempting to deal with affect in a teacher education program.

1. It is difficult to build curriculum in support of affective learning. A systematic approach to curriculum development in the cognitive area enables a complex cognitive task to be analyzed and reduced to specific elements which combine to make up or lead to the task in question. A basic problem with affective learning is that it apparently does not lend itself to this same type of analysis. Affective behaviors are usually seen as appropriate or inappropriate in relation to the total setting in which they occur, and any attempt to isolate them from their setting destroys their validity. For this reason major attention is directed to the affective dimension of teaching and learning in the Intern phase of the program, for at that point the student is immersed in the settings which give affect responses their validity. Under such conditions the sources, effects, and interactions of affective responses can be explored. Three attending problems exist: a) there is little clarity about the outcomes desired in the affective domain; b) there is little understanding as to how to bring such outcomes about even when there is clarity; and c) it is difficult to extend the power of the Intern setting for dealing with the affective dimension to other phases of the program.
2. Even if curricula could be built that related to affective learning, the complexities of interpreting the affective dimension are so great as to make instruction in the area

extremely difficult. Every instance of behavior, for example, can be analyzed for its affect in at least four ways: a) the class or category of affect represented; b) the source of the affect in the sender; c) the meaning given the affect by the receiver; and d) the congruence of meanings between sender and receiver. An example will illustrate the complexity. A teacher behaves in a way which an observer interprets as deliberately attempting to embarrass a child. The observer judges this as unproductive or undesirable, and sees in it hostility or rejection on the part of the teacher. Upon interview it is found that the intent of the teacher was to assist the child in gaining group acceptance. He chose to embarrass the child publicly as an initial step in the process of changing the child's behavior so as to make him more acceptable to the group. The child interpreted the teacher's behavior as evidence of the teacher's concern for him and accepted it as positive. To effectively "instruct" within such a situation the various perceptions of the persons involved must be clarified and understood by all.

3. A final problem rests in the unclear relationship between overt behavior and feeling. No single set of behaviors reflect anger or joy or anxiety. More subtle dimensions of affect, for example, positive regard for another, offer even greater difficulty in tying behavior to feeling. For example, people who listen carefully to one another, smile appropriately, and accept comments graciously as part of a conversation are ordinarily viewed as people who have regard for one another. Now, if the reverse is attempted, one is apt to say that people who differ, who challenge each other's ideas, and who are intense and serious in discussion lack any positive feelings toward one another. Such an assumption can be totally erroneous. High regard for an individual can be expressed in an apparent disregard for his personal feelings. Mutual commitment to a cause or task, for example, can produce a highly functional relationship which, to a casual observer, might resemble a negative, deleterious, or damaging one.

PART IV

THE OPERATIONAL MECHANISMS DESIGNED TO CARRY
THE ELEMENTARY TEACHER EDUCATION PROGRAM
PROPOSED AT OCE

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CHAPTER 9

THE INSTRUCTIONAL MECHANISMS

Schalock, H.D., Twelker, P.T. and Farr, Helen¹

Three separate though interdependent mechanisms are responsible for effective instruction within the proposed program: the Instructional Objectives Mechanism, the Instructional Design and Development Mechanism, and the Instructional Operations Mechanism. As their titles imply, the Instructional Objectives Mechanism carries the responsibility of identifying the competencies which prospective teachers are to possess when they emerge from the program; the Instructional Design and Development Mechanism carries the responsibility of preparing the learning experiences which prospective teachers will pursue in the course of developing the competencies expected of them; and the Instructional Operations Mechanism carries the responsibility of both designing and carrying out the procedures to be followed in moving students through the program.

While each of the instructional mechanisms is relatively autonomous, they in fact function hierarchically. The Instructional Objectives Mechanism specifies the ultimate objectives to be realized by the program, and these dictate the parameters within which the Instructional Design and Development Mechanism is to function. Similarly, until the Instructional Design and Development Mechanism develops the learning experiences needed to effect given competencies, the Instructional Operations Mechanism has only the existing instructional program on which to draw. Because of such hierarchical dependency the operation of the instructional mechanisms has to be closely coordinated.

In its operation the Instructional Objectives Mechanism seeks input relative to program objectives from four major sources: (1) persons in the communities served by the schools that are a part of the OCE Coalition; (2) the staff and administration of coalition schools; (3) the professional education associations within the state; and (4) the academic community. Final decisions as to program objectives are made by representatives of the primary OCE Coalition, that is, by representatives of the staff and/or administration of OCE, Teaching Research, the

¹Mr. Schalock and Miss Farr authored the section describing the Instructional Objectives Mechanism; Mr. Schalock authored the section describing the Instructional Operations Mechanism; and Mr. Twelker authored the section on the Instruction Design and Development Mechanism.

public schools involved in the Coalition, and the students enrolled in the elementary education program at OCE. It will be recalled that the objectives of the program are to be stated in terms of the instructional competencies needed to bring about the outcomes desired for pupils in the elementary grades and the instructional support competencies needed to function within the emerging elementary school context.

Upon receipt of the instructional objectives statements from the Instructional Objectives Mechanism, the Instructional Design and Development Mechanism is to prepare the learning experiences that will enable students to develop the competencies expected of them. As used in the context of the proposed program, instructional experiences include readings, lectures, the observation of films, video taped feedback sessions of a prospective teacher's performance, small group discussions, programmed learning materials, field observations, micro-teaching, "simulated" teaching experiences, etc. Central to the concept of instruction within the program, however, is the idea that whatever the learning experiences may be they will be grouped into an "instructional system" which has a known degree of reliability in bringing about the competency for which it has been designed. As with the Instructional Objectives Mechanism, representatives from the public schools, the college, Teaching Research, and students in the elementary educational program at OCE will be involved in the development of the learning experiences specified.

The Instructional Operations Mechanism has two responsibilities: (1) the design and development of the procedures required to get students into the program, get them through it, and get them out of it; and (2) the implementation of these procedures both during the development of the program (operational field trials) and during its full scale operation once it has been implemented. Functions for which the Instructional Operations Mechanism is responsible include the recruitment of students for the program; admitting them; orienting them to the nature of the program; aligning students, sponsors and clinical supervisors; carrying out long term and middle range contract negotiations; carrying out short term contract negotiations; and managing the learning experiences which lead to the fulfillment of both the short and long term contracts that have been negotiated. Staff from OCE and participating school districts, and advanced students in the elementary education program at OCE, will carry out the responsibilities of the mechanism.

Each of the instructional mechanisms is dealt with separately in the pages which follow.

The Instructional Objectives Mechanism

Mission

To specify the objectives or the outcomes expected to derive from the program, to specify the indicators generally acceptable as evidence of the realization of those objectives, to monitor the products that derive from the program to determine whether the objectives specified are being met, and to periodically review the objectives established for the program in terms of their continued relevance or appropriateness.

Tasks

1. Obtain objectives and indicator statements from each of the communities served by the OCE Coalition schools.
2. Obtain objectives and indicator statements from the faculty of each of the OCE Coalition schools.
3. Obtain objectives and indicator statements from the school boards and central administration of each of the coalition schools.
4. Obtain objectives and indicator statements from the professional education associations within the state.
5. Obtain objectives and indicator statements from the education faculty at OCE.
6. Obtain objectives and indicator statements from the OCE faculty at large.
7. Obtain objectives and indicator statements from the students in elementary education at OCE.
8. Synthesize and/or give priority to the various objectives statements offered by the various groups who have been asked to contribute them.
9. Assess the objectives proposed, in their order of priority, against the resources available to the program and arrive at a final set of objectives to be recommended for adoption by the program.
10. Monitor the products that derive from the program to determine whether the objectives specified are being met.

11. Periodically review program objectives to determine their continued relevance or appropriateness.

Rationale

Given the commitment to a Coalition based teacher education program it follows that all constituencies within the Coalition should be represented in the identification of the objectives of the program. Since the primary members of the OCE Coalition include the faculties of the school districts that are working with OCE within the Coalition, the faculty at OCE, the faculty at Teaching Research, and the students enrolled in the elementary teacher education program at the college, their representation in the objectives stating process must be central. Because the schools are responsible to the citizens of a community, however, and because the program at OCE will have major implications for elementary education and teacher education in the state, representatives from the communities served by the Coalition schools and the professional education associations within the state also need to be a part of the objectives stating process. Of major concern in the design of the Instructional Objectives Mechanism was the development of a structure which would accommodate in a reasonably effective way input from such diverse sources.

In addition to the rationale which stems from commitment to a coalition based program, or perhaps basic to it, is the rationale that if teacher education has anything to do with the quality of education in the schools then everyone whose lives are influenced by the educational process should be involved in the design of the teacher education program. This is part of a more general philosophic commitment that holds that anyone whose life is to be affected by change should, if at all possible, have part in shaping it. It is a commitment that is at the heart of the ComField model, and has guided its development and adaptation to the OCE program all along the way.

Structure

Three structures are proposed: (1) a GRASSROOTS structure; (2) a SYNTHESIZING and PRIORTIZING structure; and (3) an OBJECTIVES RECOMMENDING structure.

Function

The Grassroots Structure: to provide a broad input base for the identification of the outcomes that are to derive from the program, the identification of the indicators acceptable as evidence of the realization of those outcomes, and a review of the products that derive from the program to determine whether the objectives specified are being met. Deliberations about objectives at the grassroots level are to be carried

out in light of (a) that which is known about human development and well being, (b) that which exists socially and culturally in a given context at a given time, and (c) that which is projected for the context in the future.

The Synthesizing and Priortizing Structure: to provide a synthesis of all of the objectives statements by the various grassroots structures and order that which derives from the synthesizing effort in terms of priority. Deliberations about objectives at the synthesizing/priortizing level is also to be carried out in light of that which is known about human development and well being, the social and cultural context of the times, and the social and cultural context projected for the future.

The Objectives Recommending Structure: to weigh the priortized list of objectives against the resources available and arrive at a final set of objectives to be recommended for adoption by the program.

Composition

The Grassroots Structures:

-THE COMMUNITY SERVED BY THE COALITION SCHOOLS. Representation from all social and/or ethnic groups within a given community.

-THE FACULTIES OF THE COALITION SCHOOLS. Representation from all schools within the district at all levels.

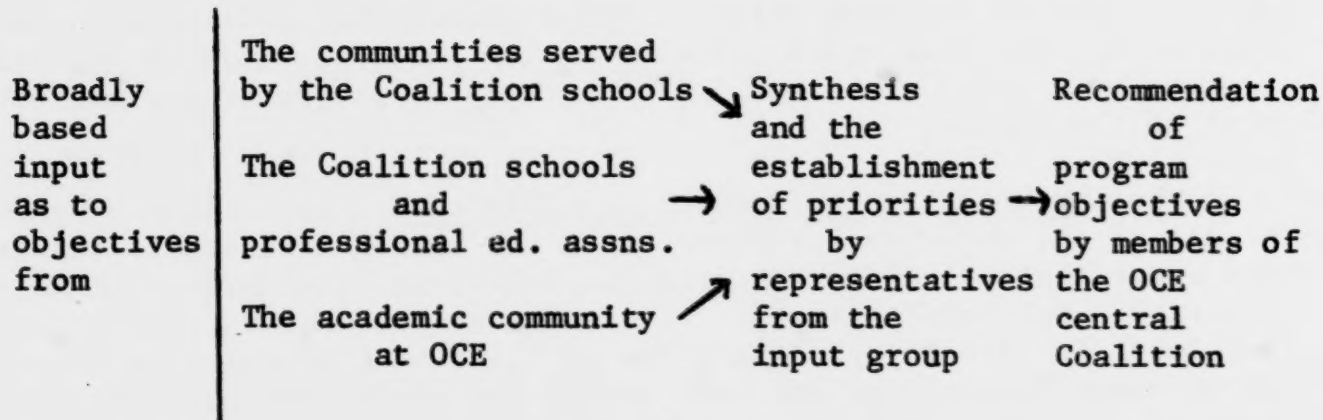
-THE SCHOOL BOARD AND CENTRAL ADMINISTRATION OF THE SCHOOL DISTRICTS IN THE COALITION.

-PROFESSIONAL EDUCATION ASSOCIATIONS. Representation from all professional education groups within the state, including teacher unions.

-THE ACADEMIC COMMUNITY AT OCE. Representatives of the various segments of the academic community within OCE that contribute directly to the elementary teacher education program.

The Sensitizing and Priortizing Structure: Elected representatives from the various grassroots structures.

The Objectives Recommending Structure: Elected members of the OCE Central Coalition, that is, members from the OCE elementary education faculty, Coalition schools, Teaching Research, and the students in the elementary education program at OCE. The structure, function and composition of the Instructional Objectives Mechanism can be illustrated schematically as follows:



Implementation

As soon as the formal objectives mechanism is established, the persons that comprise it will be engaged in an intensive, short-term training program designed to prepare them to carry out their respective functions within the mechanism. This will require the preparation of group leaders in the various grassroots structures, the preparation of representatives from each of these structures to synthesize and assign priorities to that which derives from them, the preparation of persons within the OCE central Coalition to make judgments as to recommended program objectives in light of priority statements and resources available, and the preparation of personnel to assist decision making at all of these levels in light of that which is known about human development and well-being, that which exists socially and culturally at the time, and that which is projected for the future.

The GRASSROOTS structures are expected to receive training and begin their operation at the outset of the project; the SYNTHESIZING and PRIORTIZING structure is expected to begin operation within two weeks after the grassroots structures are activated; the OBJECTIVES RECOMMENDING structure is expected to receive input from the synthesizing and priortizing group by no more than a month after its activation and to provide a preliminary listing of at least 5 professional education and 5 general education objectives, and the indicators acceptable as evidence of their realization, to the PROGRAM MANAGEMENT mechanism by the end of the first summer of project operation.

The Instructional Objectives Mechanism is expected to operate throughout the life of the program, though after the first year or two its primary function will be that of insuring that the objectives adopted by the program are appropriate and are being carried out. This will involve a relatively close monitoring of that which is occurring in the schools and community, that which is known about human development and well-being, and that which is projected for the future, as well as the systematic assessment of the effectiveness with which the program is realizing the objectives specified. After the full contingent of program objectives have been established, it is anticipated that further recommendations relative to program objectives will be

made annually and that assessment as to the effectiveness with which program objectives are being met will be made annually.

Linkages with Other Operational Mechanisms

The Grassroots Structures:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS.

1. Personnel training
2. Information management
 - a) names and addresses of the individuals comprising the various grassroots structures, their background, etc.
 - b) transmission and storage of the information that flows to the various structures
 - c) transmission and storage of the information that flows to the various structures, including information relative to that which has been done with their recommendations, the effectiveness of the program in realizing the objectives that have been adopted, etc.
3. Costing
4. Research and Evaluation
 - a) evidence as to the effectiveness with which the program is realizing its specified objectives
 - b) evidence as to the appropriateness of the objectives specified in terms of that which currently exists in the nation, state and coalition communities, that which is known about human development and well being, and that which is projected for the future.
5. Supplies and Facilities

-THAT WHICH FLOWS TO OTHER SYSTEMS.

1. A listing of the proposed objectives to the Program Accomodation Mechanism
2. A listing of the proposed objectives to the Instructional Design and Development Mechanism

The Synthesizing and Priortizing Structure:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS.

1. Personnel training
2. Information management
 - a) names and addresses of the individuals comprising the synthesizing and prioritizing structure, their background, etc.
 - b) transmission and storage of the information that flows from the structure
 - c) transmission and storage of the information that flows to the structure, including information relative to that which has been done with the recommendations, the effectiveness of the program in realizing the objectives that have been adopted, etc.
3. Costing
4. Research and Evaluation
 - a) evidence as to the effectiveness with which the program is realizing its specified objectives
 - b) evidence as to the appropriateness of the objectives specified in terms of that which currently exists in the nation, state and coalition communities, that which is known about human development and well being, and that which is projected for the future.
5. Supplies and Facilities

-THAT WHICH FLOWS TO OTHER SYSTEMS.

1. A listing of the proposed objectives to the Program Accommodation Mechanism
2. A listing of the proposed objectives to the Instructional Design and Development Mechanism

The Objective Recommending Structure:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS.

1. Personnel training
2. Information management
 - a) names and addresses of the individuals comprising the objectives recommending structure, their background, etc.
 - b) transmission and storage of the information that flows from the structure
 - c) transmission and storage of the information that flows to the structure

3. Costing

4. Research and Evaluation

- a) evidence as to the effectiveness with which the program is realizing its specified objectives
- b) evidence as to the appropriateness of the objectives specified in terms of that which currently exists in the nation, state and coalition communities, that which is known about human development and well being, and that which is projected for the future.

5. Supplies and facilities

6. Reality constraints, especially those having to do with resources available for the implementation of program objectives, from the program management mechanism

-THAT WHICH FLOWS TO OTHER SYSTEMS.

- 1. Recommendations relative to program objectives, and the indicators acceptable as evidence of their realization, to the Program Management Mechanism.
- 2. Transmission of the same information to the Program Accommodation Mechanism.
- 3. Transmission of the same information to the Instructional Design and Development Mechanism.

The Instructional Design and Development Mechanism

Mission

To specify a set of instructional experiences that provide alternative means for prospective teachers to obtain knowledges and skills required to demonstrate competence requisite to effective performance in a teaching role (for example, bring about given learning outcomes in pupils, develop curricula, or carry out a research project).

To translate these specifications into suitable instructional systems for tryout, revision, and field testing. When implemented in the operational setting they will produce the desired behaviors in a predictable manner. It is expected that instructional systems will include small-group, large-group, and individual experiences as well as field experiences, simulation experiences, laboratory experiences, and practicum experiences. They will use mediated experiences where appropriate, including self-instructional programs, video-tape recordings, learning packages, film loops, and simulation systems.

Tasks

Note: Tasks in parentheses are performed primarily through other mechanisms, but shown here so that the design-developmental process is clear from beginning to end. The assumption is made that the teams required to carry out the mission have been selected and trained in an appropriate manner.

1. Determination of requirements for form and detail of program objectives and constraints on and context of the learning experiences.
2. (Determination of program objectives -- Instructional Objectives Mechanism).
3. Determination of constraints on the instructional system and context in which the instructional experiences will be placed.
4. Determination of learner characteristics that will influence the design of instructional experiences.
5. For each competency, determination of prerequisite objectives and sequence of objectives when they are hierarchically arranged.
6. (Construction of performance measures based on objectives - Data Generation Mechanism).

7. (Design of evaluative instruments for use during the field trials and learner tryout - Data Generation Mechanism.)
8. Design of the instructional conditions necessary to achieve stated objectives.
9. Translation of all specifications into prototype components.
10. Assembly of prototype instructional system, including the integration of locally developed procedures and materials with commercially available materials.
11. Revision on the basis of individual and overall group learner tryout, and recycling of steps 9 and 10 as necessary.
12. Revision on the basis of preliminary field trial, and recycling as necessary.
13. Revision on the basis of operational field trial, and recycling as necessary.
14. Revision on the basis of refined development.
15. Packaging of the instructional system.

Rationale

A key characteristic of the proposed elementary teacher education program at Oregon College of Education is the provision of systematically derived learning experiences that will lead to students gaining competencies requisite to successful performance in the classroom. These learning experiences, clustered together in an instructional system, must be designed, developed, and tested until there is evidence that they do in fact bring about the desired competencies. An additional characteristic of instruction in the program is that there must be enough alternative experiences within each instructional experience that learners can select a program of study that is appropriate to them personally.

Structure

In contrast to the Instructional Objectives Mechanism, the structure for the Instructional Design and Development Mechanism is the TEAM. Three different types of teams, representing very unique capabilities and goals, are proposed:

- 1) a GENERAL STUDIES TEAM will be responsible for designing and developing instructional materials that primarily emphasize related academic disciplines to education that might best be considered "liberal arts." The objectives developed will minimize the direct vocational translation into practice, but hold intrinsic value for the individual. These teams are designated G1, G2, G3 and G4.
- 2) a CLINICAL STUDIES - INTERN TEAM will be responsible for designing and developing instructional materials that relate to specified learning experiences. These task forces are designated CI1 and CI2.
- 3) a GENERAL STUDIES - CLINICAL STUDIES - INTERN TEAM will be responsible for designing and developing instructional materials that will be directly applicable in the vocational setting (GCI-1 and GCI-2).

These teams, eight in number, will be composed of individuals who are charged with developing instructional experiences for sixteen competencies. The teams are directly related to, and in some cases, dependent on each other. For example, a CLINICAL STUDIES - INTERN TEAM is paired with GENERAL STUDIES TEAMS to work on the same competencies. The relationship between teams and the three phases of instruction (general studies, clinical studies, and internship) are shown in Figure 17. In addition to the eight teams noted above, a ninth team to be added the sixth year of operation is alluded to below. This team is responsible for further design and developmental work deemed appropriate and is labeled GCI3. Since GCI3 is not actually part of the five-year program, it is not included in the discussion of the eight teams who are responsible for developing instructional systems for the five-year operation.

In order to expedite the mission of each team, that is, to design and develop instructional experiences for competencies in the three phases, the team performs multiple functions. These functions are listed below:

- 1) Mechanism Coordination
- 2) Information Processing
- 3) Curriculum Material Selection
- 4) Instructional Systems Design
- 5) Instructional Systems Development
- 6) Preliminary Field Trial Evaluation-Modification
- 7) Operational Field Trial Evaluation-Modification
- 8) Refined Development (for CI and GCI teams only)

Phase			
Competency	General Studies	Clinical Studies	Internship
1 2 3 4	} G1 } G2	} CI1	→
5 6 7 8 9 10	} G3 } G4	} CI2	→
11 12 13 14 15 16	} GCI 1 } GCI 2		→

Figure 17. The Teams (Designated G1, G2, etc.) That will Design and Development Instructional Systems and their Relationship to the Various Instructional Settings

Team members will not be divided into groups to service each function. Functions will be completely integrated with respect to composition of members, with possible exception of the first. One particular member may perform as many as three or four different functions.

Functions

The Mechanism Coordination Function serves to coordinate the efforts of the team members so that the team goal of designing and developing instructional experiences is facilitated. Some specific activities are:

- 1) monitors progress of individual team members to assure on-time delivery of essential outputs;
- 2) assesses the manpower needs, personnel qualifications, and training requirements;
- 3) monitors the budget;

- 4) prepares the PERT charts for team efforts;
- 5) reviews the design and development work in light of PERT charts to ascertain problems as well as progress;
- 6) reviews the design specifications for overall excellence;
- 7) facilitates the review of team work by outside consultants;
- 8) reports the problems encountered that demand attention; and
- 9) facilitates the solving of problems encountered.

The Information Processing Function will serve to collect, collate, store, and distribute information of potential use to the various teams. The effectiveness of the structure depends upon the identification of the information needs of each team member and the sources of information to fulfill those needs.

The Curriculum Material Selection Function will serve to acquire, catalogue, store, and distribute available existing curriculum materials for preview and possible incorporation into the instructional system. The effectiveness of this function depends upon the identification of sources of curriculum materials. Since the instructional systems to be designed and developed may use available materials, the importance of this function cannot be over-emphasized.

The Instructional Systems Design Function for the team creates specifications for a series of learning experiences that provide alternate means for prospective teachers to acquire knowledges and skills that are required to effect a given competency. The outcome of this effort is a paper that specifies the nature of materials and procedures to achieve the desired outcomes. Note that it is not the task of this function to develop materials for the system. It will be necessary that team members pay careful attention to the feasibility of specifications in relation to the context in which instruction will occur. Logistical information about pupils, location, number, and proximity to the institution providing laboratory and practicum settings, will be submitted with the specifications for the instructional system.

Specific activities include:

- 1) identify those learner characteristics which are relevant to the design of the instructional system;
- 2) identify tentatively the general characteristics of the system to be used to achieve the particular competencies previously identified (these specifications serve to guide the designer in sub-

sequent activities, but are subject to revision as he gains further information about the system);

- 3) identify the relationships between the various prerequisite objectives within a given instructional system that gives rise to a competency;
- 4) translate the relevant information from the literature and research findings into guidelines for the specification of instructional conditions;
- 5) identify the type of learning function represented for each competency (e.g., concept learning, principle learning, problem-solving), and the instructional strategies that provide general conditions of learning;
- 6) specify the instructional events for achieving each objective, including the content and operations involved in learner responses, stimulus situations, and feedback, as well as specify hardware and media requirements;
- 7) specify the desirable context of instruction relative to each objective, including learning space characteristics;
- 8) specify the appropriate sequence (where appropriate) of all instructional events to insure optimal mediational effects from one component to another;
- 9) specify the required or permissible context of instruction for each instructional system or part thereof (composed of two or more individual objectives), especially as it relates to the Clinical Studies-Intern settings; and
- 10) revise specifications on the basis of expert consultation.

It should be noted that in no way do the above specifications conflict with the idea of personalization of instruction, i.e., that there shall be more than one way in which to learn a competency. These specifications offer a "skeleton" or framework on which may be hung many alternative learning experiences. Yet, each alternative experience is grounded in any known principles of instruction as translated in the specifications.

The Instructional Systems Development Function serves to translate the instructional "blueprints" into prototype instructional experiences for the purpose of trying out and revising the components with individuals or small groups of learners. Specific activities include:

- 1) translate all general specifications into actual specific guidelines, rules and recommendations where required to expedite development;
- 2) determine and evaluate the alternatives in
 - a) hardware
 - b) graphics
 - c) photography
 - d) material reproduction;
- 3) procure, prepare, or produce all required material, including hardware, graphic arts, photographic media, textual material;
- 4) collate all components into suitable form for expert review and learner tryout and revision;
- 5) facilitate review of components by team members familiar with the Instructional Systems Design Function to assure fidelity to specifications; modify components to correct flaws detected;
- 6) implement learner tryout, evaluate findings, and modify components accordingly (Functions 3, 4 and 5 are cyclical in that revisions based on expert review and learner tryout demand new or revised prototype forms constantly);
- 7) assemble all components into prototype instructional systems suitable for field trial.

The Preliminary Field Trial Evaluation - Modification Function serves to try out the instructional system, or components thereof, on a large scale. Usually, a field trial is conducted under as close to operational conditions as possible where actual instruction is managed by "on-line" instructors and not team personnel. The operational field trial considered below is taken in that sense. As used in the proposed program, however, preliminary field trials are considerably less rigorous. For all design and development teams preliminary field trials are scheduled within a year after work begins on an instructional system and it is not expected that the systems will be completed at that time. As a consequence it is anticipated that the preliminary field trials will be carried out by team members. This will provide an opportunity to tryout and revise components of an instructional system while still developing other components. Specific activities will include:

- 1) managing the preliminary field trials;
- 2) administering the instructional systems in the operational situation but under close monitoring;

- 3) modifying components within the system.

The Operational Field Trial Evaluation - Modification Function serves to administer, evaluate, and modify the instructional system while in use in a fully operational situation. The management of instruction will be solely in the hands of on-line instructors, who will also be responsible for assisting in the analysis and modification of the instructional system with design-development team personnel.

The Refined Development Function serves to refine the omnibus instructional system that includes all three phases: general studies, clinical studies, and internship. The rationale is that after teams have designed and developed instructional experiences for all three phases and monitored students through them, the experience gained will lead to revisions throughout the system. This activity is especially crucial for those competencies that have been handled by two separate teams.

Composition

Teams. As noted above, three types of teams will be used to carry out the mission of this mechanism. All teams include the following types of individuals:

- 1) a Coordinator
- 2) Developers
- 3) OCE academic staff
- 4) coalition supervising teachers (not included on the General Studies teams)
- 5) Teaching Research staff
- 6) graduate assistants
- 7) development technicians (photographers, artists, etc.)
- 8) student assistants, who have demonstrated mastery in the areas for which they will be responsible, and
- 9) secretaries

Since each type of team has unique responsibilities, the composition across teams varies considerably. These variations are discussed below. Detailed descriptions of the composition of each team by year are given in Table 3 (see page 136).

General Studies Teams. The ratio of Developers to OCE Academic Staff in this type of team is approximately 1:2 since the bulk of the design and development efforts relate more to liberal arts than to vocational preparation.

Clinical Studies - Internship Teams. The ratio of Developer to OCE Academic Staff in the CI teams is 1:1. The ratio of Developer to Coalition Supervising Teacher is approximately 1:2. Since a large portion of the design-developmental efforts involve the local schools, such a ratio seems reasonable.

General Studies - Clinical Studies - Internship Teams. The ratio of Developer to OCE Academic Staff as well as Coalition Supervising Teacher is 2:3. In effect, the composition of the GCI team represents a combination of the G team and the CI team.

Implementation

The success of a personalized, field-centered and performance-based teacher education program rests in large measure on the efficient development of instructional materials and procedures. A great amount of attention must be directed to the organization of the teams so as to facilitate the various functions required to accomplish the mission.

The timetable for the design and development of materials is demanding. Four types of activity are noted below.

- 1) Planning and Development - - designing and developing instructional materials and procedures to be used and modified in the:
- 2) Preliminary Field Trial - - where team members will integrate materials and procedures developed during this phase with existing materials, and use and modify instructional experiences in classes in order that a complete instructional system is ready to field test during the:
- 3) Operational Field Trial - - where "on-line" instructional managers tryout the system in an operational setting.
- 4) Refined Development - - further refinement on the basis of field testing instructional systems in all three phases.

In order to regulate the amount of energy going into the system, and to assure some probability of success in completing the mission, the Instructional Design and Development Mechanism allows for:

- 1) staggered start-up dates for beginning design and development work on the competencies;

- 2) differential staffing for each year, depending on tasks to be performed;
- 3) the inclusion of Instructional Operations Mechanism personnel during the operational field trial;
- 4) the shifting of experienced team members to new teams.

Each of these features of the operation of the mechanism are discussed below.

Examination of Figure 18 reveals the start-up time for beginning work on each competency. Note that in Year 1 (1970-71), instructional experiences for seven competencies will have to be developed in time for the preliminary field trial at the beginning of Year 2. Three of these competencies will involve clinical studies and internship experiences in addition to general studies, but only the latter will be expected to be field tested the subsequent year. It will also be noted that for these seven competencies, there exists no lead time to develop effective team operational procedures to begin design and development activities.

Fortunately not all functions have to be implemented within each team at once. The eight functions, together with a timetable for their implementation within each team appear below.

Structure	G1, G2, GLI1	G2, G4, GLI2, CI1	CI2
Team Coordination	July 1, 1970	July 1, 1971	July 1, 1972
Information Processing	July 1, 1970	July 1, 1971	July 1, 1972
Curriculum Material Selection	July 1, 1970	July 1, 1971	July 1, 1972
Instructional Systems Design	July 1, 1970	July 1, 1971	July 1, 1972
Instructional Systems Development	July 1, 1971	July 1, 1972	July 1, 1973
Preliminary Field Trial Evaluation Modification	July 1, 1971	July 1, 1972	July 1, 1973
Operational Field Trial Evaluation Modification	July 1, 1972	July 1, 1973	July 1, 1974
Refined Development	July 1, 1973	July 1, 1974	July 1, 1975

The situation may be summarized as follows. The effective implementation of operations to accomplish the mission of the mechanism depend in large part on the effective operation of the first four functions shown in the table above for Task Forces G1, G2, GCI1, and to a somewhat lesser extent CI1. These four teams share the brunt of starting up operations "cold" with little preliminary planning and with little previous experience in working together. Task Force CI1 is an exception as noted below.

Competency	Start-Up Time								
	Year 1		Year 2		Year 3				
	Phase								
	General Studies	Clinical Studies	Internship	General Studies	Clinical Studies	Internship	General Studies	Clinical Studies	Internship
1	*				*	*			*
2	*				*	*			*
3	*				*	*			*
4	*				*	*			*
5				*				*	*
6				*				*	*
7				*				*	*
8				*				*	*
9					*			*	*
10					*			*	*
11	*	*	*						
12	*	*	*						
13	*	*	*						
14				*				*	*
15				*				*	*
16				*				*	*

Figure 18. Start-up Times for the Design and Development of Instructional Systems.

Since a team cannot be expected to operate in a highly effective way "from scratch", the teams that began operation the first year will take some time to iron out operational procedures. It is assumed that a certain portion of time the first year of any team's operation will be devoted to organizational matters and operational procedures, thus taking valuable time from actual design and development efforts. In an effort to counteract this drain of energy, the first year's staffing of the teams will be "inflated"--extra personnel will be added. Examination of Table 2 will reveal the "inflated" staffing for Teams G1, G2, G11, G12.

The rationale for starting up the design and development of instructional systems for competencies 5-9 and 14-16 one year later than for competencies 1-4 and 10-13 rests on the assumption that wisdom and experience gained from the first year's efforts may be used to facilitate the initial efforts of the new teams, both in terms of organization as well as design and development skills. In order to facilitate the transfer and translation of these knowledges and skills, a shift will occur in team members. A number of experienced team members will shift to new teams that will be starting up at the end of the first year. The shifts for each type of team are shown below:

General Studies Team

- 1 OCE Academic Staff
- 1 Developer
- 1 Teaching Research Staff
- 1 Graduate Assistant
- 1 Student

From G1 → G3
G2 → G4

General Studies-Clinical Studies-Internship Team

- 1 OCE Academic Staff
- 1 Developer
- 1 Graduate Assistant
- 1 Evaluation Supervising Teacher
- 1 Student

From GCI → C11
GCI → GCI2

Clinical Studies-Internship Team

- 1 OCE Academic Staff
- 1 Developer
- 1 Teaching Research Staff
- 1 Graduate Assistant
- 1 Student
- 1 Evaluation Supervising Teacher

From C11 → C12

Table 2. The Overall Plan for the Implementation of the Instructional Design and Development Mechanism.

Year	Teams								Number of Competencies under development
	G ₁ C1, 2	CI ₁ C1,2,3,4	G ₂ C3,4	CI ₁ C11,12,13	G ₃ C5,6,7	CI ₂ C5-10	G ₄ C8,9,10	GCI ₂ C14,15,16	
I	PD f Inflated		PD f Inflated	PD f lp Inflated					PD f = 7 PD lp = 3
II	PFT f Regular	PD lp Inflated	PFT f Regular	PFT f PD lp Regular	Regular		PD f Regular	PD f lp	PD f = 9 PD lp = 10 PFT f = 7
III	OFT f Reduced	PFT lp Regular	OFT f Reduced	OFT f PFT lp PFT f Regular	Regular	Regular	PFT f Regular	PFT f PD lp Regular	PD lp = 9 PD p = 6 PFT f = 9 PFT lp = 7 OFT f = 7
IV		RD f OFT lp PFT p Reduced		RD f PFT lp PFT p Reduced	Regular	PFT lp PD p Regular	OFT f Reduced	OFT f PFT lp PD p Regular	PD p = 9 PFT lp = 9 PFT p = 7 OFT f = 9 OFT lp = 7 RD f = 4
V		OFT p RD f lp Skeleton		RD f lp OFT p Skeleton	Reduced	OFT lp PFT p RD f Regular		RD f OFT lp PFT p Reduced	PFT p = 9 OFT lp = 9 OFT p = 7 RD lp = 16
VI		RD f p Skeleton		RD lp Skeleton		OFT p RD f lp Skeleton		RD f lp OFT p Skeleton	OFT p = 9 RD f = 9 RD lp = 16 RD p = 7
VII						RD lp Skeleton		RD lp Skeleton	RD lp = 9 RD p = 9

PD=Preliminary Design and/or Development
PFT=Preliminary Field Trial
OFT=Operational Field Trial
RD=Refined Development

→ = all students entering the program

It should be made clear that the decrease of staffing between Year 1 and Year 2 of teams beginning operation in Year 1 is equal to the shift of experienced team members to new teams. It should also be noted that Team CI2 gains its experienced members from GCI2, who also furnishes experienced team members to GCI2.

Staffing is reduced still further for some teams when the operational field trials are conducted. Such trials involve "on-line" instructional managers from the Instructional Operations Mechanism, and it is at this point that the personnel and activities of that mechanism are linked to instruction. Since this field trial must use "on-line" instructors responsible for all aspects of the instructional program, there is little need for large staffing of the task force, unless continued development of preliminary field trials are being conducted, as will be the case with the GCI Teams.

These on-line instructors should be considered as ad-hoc task force members responsible for assisting in the modification of instructional materials and procedures along with other task force personnel.

The relationship between task force staffing and phase of development is summarized in Table 3. Detailed discussions of the "mix" between the Instructional Design and Development Mechanism and the Instructional Operations Mechanism appear on pages 147 to 148.

Table 3. The Composition of Instructional Design and Development Teams By Year of Operation

Team	Year	Activity** Description	Staff									Staffing Description
			Mechanism Coordinator	Teaching Research Staff	Developer	OCE Academic Staff	Development Technician	Graduate Assistant	Student	Coalition Super vising Teacher	Secretary	
G1 G2	1	Planning & Development	2- .50	6 .50	10 .50	6 .50	4 .50	8 .50	12 .50		3 1.00	Inflated*
	2	Preliminary Field Trial	2 .50	4 .50	8 .50	4 .50	6 .50	6 .50	12 .50		3 1.00	Regular
	3	Operational Field Trial	2 .50	2 .50	4 .50	2 .50	2 .50	4 .50	16 .50		2 .75	Reduced
G3 G4	2	Planning & Development	2 .50	4 .50	8 .50	4 .50	4 .50	6 .50	12 .50		3 1.00	Regular
	3	Preliminary Field Trial	2 .50	4 .50	8 .50	4 .50	4 .50	6 .50	12 .50		3 1.00	Regular
	4	Operational Field Trial	2 .50	2 .50	4 .50	2 .50	2 .50	4 .50	6 .50		3 .75	Reduced
	1	Planning & Development	1 .50	4 .50	8 .50	6 .50	5 .50	7 .50	8 .50	9 .50	5 .75	Inflated*
	2	Continued Development Preliminary Field Trials	1 .50	2 .50	6 .50	4 .50	4 .50	5 .50	6 .50	7 .50	3 1.00	Regular
	3	Continued Development Preliminary & Operational Field Trials	1 .50	2 .75	6 .50	4 .50	4 .50	5 .50	6 .50	7 .50	3 1.00	Regular
	4	Field Trials; Refined Development	1 .50	1 .75	3 .50	2 .50	2 .50	3 .50	4 .50	4 .50	2 1.00	Reduced
	5	Operational Field Trial Refine Development	1 .25	1 .50	1 .75	1 .75	1 .50	2 .50	2 .50	2 .50	2 .50	Skeleton

*The loss in personnel between the "Inflated" staffing year and the "Regular" year represents those individuals who shift to teams beginning operation during the next year.

Table 3 continued.

GCI 2	2	Planning & Development	1 .50	3 .50	6 .50	4 .50	4 .50	6 .50	6 .50	7 .50	3 1.00	Regular
	3	Continued Development; Preliminary & Field Trial	1 .50	3 .50	6 .50	4 .50	4 .50	6 .50	6 .50	7 .50	3 1.00	Regular
	4	Continued Development; Preliminary & Operational Field Trials	1 .50	3 .50	6 .50	4 .50	4 .50	6 .50	6 .50	7 .50	2 1.00	Regular
	5	Field Trials; Refined Development	1 .50	3 .75	3 .50	2 .50	4 .50	3 .50	4 .50	4 .50	2 .50	Reduced
	6	Operational Field Trials Refined Development	1 .25	1 .50	1 .25	1 .25	1 .50	1 .50	1 .50	2 .50	2 .50	Skeleton
CI 1	2	Planning & Development	1 .50	3 .50	3 .50	3 .50	2 .50	3 .50	6 .50	8 .50	2 1.00	Inflated*
	3	Continued Development; Preliminary Field Trial	1 .50	2 .50	2 .50	2 .50	2 .50	2 .50	5 .50	7 .50	2 1.00	Regular
	4	Preliminary & Operational Field Trial; Refined Development	1 .50	1 .50	1 .50	1 .50	1 .50	1 .50	3 .50	4 .50	2 .50	Reduced
	5	Operational Field Trials Refined Development	1 .25	1 .25	1 .25	1 .25	1 .25	1 .25	1 .50	2 .50	2 .25	Skeleton
CI 2	3	Planning & Development	1 .50	2 .50	2 .50	2 .50	2 .50	2 .50	5 .50	7 .50	2 1.00	Regular
	4	Continued Development; Preliminary Field Trial	1 .50	2 .50	2 .50	2 .50	2 .50	2 .50	5 .50	7 .50	2 1.00	Regular
	5	Preliminary & Operational Field Trial	1 .50	1 .50	1 .50	1 .50	1 .50	1 .50	3 .50	4 .50	2 .50	Reduced
	6	Operational Field Trial Refined Development	1 .25	1 .25	1 .25	1 .25	1 .25	1 .50	1 .50	2 .50	2 .25	Skeleton

Linkages with Other Mechanisms

Team Coordination Function:

-THAT WHICH IS NEEDED FROM OTHER MECHANISMS

1. From the Personnel Selection and Development Mechanism
 - a. Information on consultants
 - b. Screening of candidates for positions
 - c. Provision of training for personnel
2. From the Cost Accounting Mechanism
 - a. Identification or calculation of cost of resource projections
 - b. Identification or calculation of cost of resources expended
 - c. Requests for adaptive corrective actions as required
3. From the Instructional Operations Mechanism
 - a. Information on number of students admitted to program
4. From all Other Mechanisms
 - a. Information that is required to effect the smooth operation of team coordination

-THAT WHICH FLOWS TO OTHER MECHANISMS

1. To the Personnel Selection and Development Mechanism
 - a. Needs and requirements in terms of personnel and training
 - b. Criteria for selection of personnel
2. To the Cost Accounting Mechanism
 - a. Budget information
 - b. Cost Projections
 - c. Other information that will allow the mechanism to achieve its goal
3. To the Instructional Operations Mechanism
 - a. Information on progress and states of all field trials
4. To all Other Mechanisms
 - a. Information that is required by them to effect a smooth operation of the mechanism.

Information Processing Function

No particular linkages with other mechanisms are envisioned at this time as the mechanism operates almost solely as an internal agent. If information is collected and assessed to be of such value that a training program should be initiated, linkages will be established with the Staff Selection and Development Mechanism.

Curriculum Material Selection Function

No particular linkages are seen.

Instructional Systems Design Function

-THAT WHICH IS NEEDED FROM OTHER MECHANISMS

1. From the Program Objectives Mechanism
 - a. Program Objectives and statement of constraints on the instructional systems and context in which they will be used

-THAT WHICH FLOWS TO OTHER MECHANISMS

1. To the Program Objective Mechanism
 - a. Requirements for form of objectives and constraints

Instructional Systems Development Function

-THAT WHICH IS NEEDED FROM OTHER MECHANISMS

1. From the Instructional Operations Mechanism
 - a. Students for component tryouts
2. From the Data Generation Mechanism
 - a. Evaluation Measures
 - b. Criterion measures
 - c. Experimental design for tryout
3. From Information Management Mechanism
 - a. Data processing

-THAT WHICH FLOWS TO OTHER MECHANISMS

1. To the Data Generation Mechanism
 - a. Listing of hierarchical (enabling) objectives
 - b. Information that would bear on the experimental design of the learner tryout collection produces

2. To the information Management Mechanism
 - a. Data from learner tryout
 - b. Requirements for form of the analysis

Preliminary Field Trial Evaluation-Modification Function

-THAT WHICH IS NEEDED FROM OTHER MECHANISMS

1. From the Instructional Operations Mechanism
 - a. Coordination of all phases of the operational situation with the preliminary field trial
2. From the Data Generation Mechanism
 - a. Evaluation measures (revised if necessary)
 - b. Criterion measures (revised if necessary)
 - c. Experimental design for field trial
3. From the Information Management Mechanism
 - a. Data processing

-THAT WHICH FLOWS TO OTHER MECHANISMS

1. To the Data Generation Mechanism
 - a. Listing of enabling objectives (revised if necessary)
 - b. Information that would bear on the experimental design of the field trial data collection procedures
2. To the Information Management Mechanism
 - a. Data from preliminary field trial
 - b. Requirements for form of the analysis

Operational Field Trial Evaluation-Modification Function

-THAT WHICH IS NEEDED FROM OTHER MECHANISMS

1. From the Instructional Operations Mechanism
 - a. Coordination of all phases of the operations situation with the preliminary field trial
2. From the Data Generation Mechanism
 - a. Evaluation measures (revised if necessary)
 - b. Criterion measures (revised if necessary)
 - c. Experimental design for field trial
3. From the Information Management Mechanism
 - a. Data Processing

-THAT WHICH FLOWS TO OTHER MECHANISMS

1. To the Data Generation Mechanism
 - a. Listing of enabling objectives (revised if necessary)
 - b. Information that would bear on the experimental design of the field trial data collection procedures
2. To the Information Management Mechanism
 - a. Data from preliminary field trial
 - b. Requirements for form of the analysis

Refined Development Function

All linkages that are specified for the Instructional Systems Development Function, and the two Field Trial Evaluation-Modification Functions are appropriate here.

The Instructional Operations Mechanism

Mission

To facilitate students' entry into and movement through the program in a way that is consistent with the commitment to a personalized, field-centered and performance based teacher education program.

Tasks

1. Provide information to prospective students about the program, what is required to enter and leave it, how to go about applying for entry into it, etc.
2. Carry out the admissions function.
3. Orient students to the nature of the program, including information about options within it and the consequences which flow from them.
4. Align students with a sponsor who will negotiate middle range and long term work contracts within the general and clinical studies phases of the program, manage the self-confrontation experiences engaged in during those phases, and carry out criterion assessments relative to the long term contracts negotiated.
5. Align students with a clinical supervisor who assists the sponsor in all his responsibilities in the clinical studies phase of the program and who changes roles with the sponsor in the intern phase.
6. Align students with an instructional staff which negotiates short term contracts within the framework established by the middle range and long term contracts negotiated by the sponsor and/or the clinical supervisor, and which provides assistance in moving through the learning experiences needed in order to fulfill the contracts negotiated.
7. Provide the means whereby students can be assessed for entry into the clinical studies phase of the program (PRELIMINARY assessment), entry into the intern phase of the program (INITIAL certification), and for entry into the profession as a fully certified teacher (CONTINUING certification).

Rationale

The interaction between students and faculty, students and students, and students and materials will be considerably different in the proposed program than it is in the on-going program. Because of these differences, and because that which happens to students determines the success or failure of the program, a separate mechanism was established to develop the procedures whereby students enter, move through and exit from the program, and then apply them as the program becomes operational.

Structure

It is proposed that five structures be employed to carry out the mission of the Instructional Operations mechanism: (1) a RECRUITMENT and ADMISSIONS structure; (2) a competency facilitating structure at the GENERAL STUDIES level; (3) a competency facilitating structure at the CLINICAL STUDIES level; (4) a competency facilitating structure at the INTERN level; and (5) a CERTIFICATION structure.²

Function

The Recruitment and Admissions Function: to inform students across the state or within the region about the program, to establish criteria for admission to the program, and to handle the admission process.

The Competency Facilitation Function in the GENERAL STUDIES PHASE

1. To align a student with a sponsor who (a) offers guidance relative to program objectives on the basis of all that is known about a student; (b) provides for middle range and long term contract negotiation in light of (a); (c) evaluates as to criterion competency; and (d) manages the experiences that provide a basis for self understanding in relation to all of the above.
2. To align a student with an on-line instructional staff which (a) provides for short term contract negotiations in light of the middle range and long term contracts negotiated with the sponsor, and (b) which facilitates the student's move-

²The Dissemination Mechanism is called upon to orient students to the program as they enter it, and as they pass from phase to phase within it.

ment through the specific learning experiences, for which he has contracted. In the latter role the instructional staff (1) provides and/or arranges learning experiences e.g., lectures, conferences relative that which has been read or discussed, small discussion groups; (2) assesses the level of mastery that derives from specific learning experiences; (3) offers feedback and guidance on the basis of assessment data; and (4) supervises appropriate record keeping relative to short term learning experiences, etc.

It is estimated that the personnel needed to operate the instructional program at the GENERAL STUDIES level, on either a field trial or a full scale operational basis, is as follows:

Professional staff: 1@ .50 FTE for the management of on-line instruction for 10 students;

Students: 1@ .50 FTE for the management of on-line instruction for 10 students;

Record Clerk: 1@ 1.0 FTE for managing the records of 45 students.

Operationally this means that six professional staff @.50 FTE, 9 students @ .50 FTE and 2 record clerks @ 1.0 FTE could accommodate the needs of 90 students in the GENERAL STUDIES program.

The Competency Facilitation Function in the CLINICAL STUDIES PHASE

1. To align a student with a sponsor who carries out the same responsibilities as he carries out in GENERAL STUDIES (hopefully the sponsor in GENERAL and CLINICAL STUDIES will be one and the same for a particular student), and a clinical supervisor who will support the sponsor in his responsibilities in the field setting. By a sponsor and clinical supervisor working together in the guidance and supervision of a student's learning program, two advantages accrue: (a) optimal utilization of the field setting, and (b) a basis for transferring the center of learning from the college setting to the field setting in the INTERN phase will be established
2. To align a student with an instructional staff which carries out the same functions as they carried out in the GENERAL STUDIES phase of the program (though the nature of the activities involved in carrying out those functions will differ.)

It is anticipated that approximately the same resource requirements will be needed for handling sponsorship and instructional functions at the CLINICAL STUDIES level as at the GENERAL STUDIES level,

even though the nature of those functions will vary considerably. In the clinical setting, sponsorship responsibilities will begin to shift to field-centered clinical supervisors and on-line instructional functions will center around integrative activities, i.e., the observation/recording of performance under simplified conditions, assessment of the performance and its consequences, feedback, etc. The specific formula used in estimating personnel needs in the CLINICAL setting is:

Professional staff needed in the role of sponsor: 1 @ .25 FTE for 15 clinical students;

Professional staff needed in the role of clinical supervisor: 1 @ .50 FTE for 15 clinical students;

Students: 1 @ .50 FTE for 10 clinical students;

Record Clerk: 1 @ 1.0 FTE for managing the records of 45 clinical students.

It is anticipated that this formula will hold for either field trial or full scale operations.

The Competency Facilitation Function in the INTERN PHASE

1. To align a student with a clinical supervisor who changes roles in the field with the college based sponsor (when appropriate and possible a student may remain in the same school for both his CLINICAL and INTERN experiences, and when he does he will likely have the same clinical supervisor for both experiences).
2. To align a student with an instructional staff which carries out the same functions provided in the GENERAL and CLINICAL STUDIES settings in those areas of competency reserved for development in the field. Work to be covered in GENERAL STUDIES areas, ordinarily offered in the college setting but which is discovered to be needed in order to function in the field setting, is to be pursued through independent study under the guidance of either college or field based personnel.

It is estimated that resource requirements will increase in the INTERN setting over the GENERAL and CLINICAL STUDIES settings by roughly a factor of two. This stems from the heavy resource requirements for clinical supervision in the field setting. The formula used in estimating personnel needs in the INTERN setting is:

Professional staff needed in role of sponsor: 1 @ .25 FTE for 15 resident students;

Professional staff needed in the role of clinical supervisor: 1 @ .50 FTE for 5 resident students;

Students: 1 @ .50 FTE for 10 resident students;

Record Clerk: 1 @ 1.0 FTE for managing the records for 45 clinical students.

It is anticipated that the formula will hold for both field trial and full scale operations.

The Certification Function: to formally document that students have completed requirements for the various certification levels proposed within the program.

Composition

The Recruitment and Admissions Structure: representatives of the Coalition joining with the established college recruitment team; an admissions board comprised of central Coalition members.

The Competency Facilitation Structure at the GENERAL STUDIES Level:

1. The sponsor - a member of the college faculty.
2. On-line instructional personnel - (a) college faculty needed to carry out highly selective aspects of the instructional program; (b) college students who have demonstrated mastery in the areas for which they are to be responsible as instructors (again, instructional management as used here includes lecturing, conferencing relative to that which has been read or discussed, the organization of and/or leadership in small group or large group discussions, assessments, guidance on the basis of assessments, etc.)

The Competency Facilitation Structure at the CLINICAL STUDIES Level:

1. The sponsor - ideally the same person serving as sponsor in the GENERAL STUDIES phase.
2. The clinical supervisor - a faculty member of the school in which a student would like to take his residency experience.
3. On-line instructional staff - college or public school faculty as needed to perform specialized teaching functions, and students who have demonstrated mastery in the areas in which they are to function as instructors.

The Competency Facilitating Structure at the INTERN Level:

1. The clinical supervisor - in some cases the same person that served as clinical supervisor in the CLINICAL setting.

2. The sponsor - hopefully the same person that served as sponsor in the CLINICAL setting.
3. On-line instructional staff - selected college or field based personnel to perform highly specialized functions required in the INTERN setting, and students who have already demonstrated the competencies being worked toward.

The Certification Structure: a Certification Board that will consist of personnel from all segments of the Coalition, including representation from the student body, the State Department of Education and professional education associations.

Implementation

As indicated previously, the commitment to a personalized, field-centered and performance based teacher education program has major implication for the procedures followed in facilitating students passing through the program, including the process of certification. As a consequence a great deal of attention must be directed to the development of the procedures to carry on-line instruction in such a program. Because of the complexity of the task, the fact that it must be accomplished by the time that revised or new instructional materials are ready to be used, and because of the close interaction between the nature of instructional procedures and the nature of the learning task to be pursued, the Instructional Operations Mechanism needs to begin with and proceed along side of the instructional materials development effort.

Like the instructional materials development effort, not all aspects of the Instructional Operations Mechanism will be developed at once. Three of the five structures within the mechanism have a greater urgency about their development than do the others: the recruitment and admissions structure, the competency facilitating structure at the GENERAL STUDIES level, and the certification structure. As a consequence the materials and procedures needed in support of the operation of these three structures will be developed to the point of being ready for a preliminary field trial during the first year of implementation. In addition advanced planning will be done with reference to the competency facilitating structure at the CLINICAL and INTERN levels.

Three classes of activity will occur in the second year of implementation: (1) preliminary field trials with the materials developed the preceding year and the subsequent development of those materials on the basis of field trial data; (2) first level development in relation to the competency facilitating structure at the CLINICAL level and the certification structure at the PRELIMINARY certification level; and (3) advanced planning for the competency facilitating structure at the INTERN level.

The third year of the implementation project will see four classes of activity: (1) operational field trials on materials previously tested; (2) preliminary field trials for that which was developed the year previously; (3) first round development of the competency facilitating structure at the INTERN level and the certification structure at the INITIAL Certification level; and (4) the preparation of personnel to carry out sponsor and on-line instructional functions in the first full scale implementation run that is to follow operational field testing.

The fourth year of the project will see five classes of activity: (1) first run full implementation of the recruitment and admissions structure, the competency facilitating structure at the GENERAL STUDIES level, and the certification structures at the PRELIMINARY CERTIFICATION level; (2) operational field trials for the competency facilitating structure at the CLINICAL level; (3) preliminary field trials of the competency facilitating structure and the certification structure at the INTERN level; (4) the preparation of personnel to assume sponsor, clinical supervision, and instructional functions for full scale operation at the CLINICAL level; and (5) the refined development of the competency facilitating structure at the GENERAL STUDIES level on the basis of feedback deriving from students who have moved through all three phases of the program.

The fifth year of the project will also involve five activities: (1) full scale implementation of the recruitment and admissions structure, the competency facilitating structure at the GENERAL STUDIES level, and the certification structure at the PRELIMINARY CERTIFICATION level; (2) the first run full scale operation of the competency facilitating structure and the certification structure at the CLINICAL level; (3) operational field test of the competency facilitating structure and the certification structure at the INTERN level; (4) the preparation of personnel to assume clinical supervision and on-line instructional responsibilities in the first run full scale implementation of the instructional competency and certification mechanisms at the INTERN level; and (5) the refined development of the CLINICAL phase of the program on the basis of feedback from students who have gone through the INTERN phase of the program.

The five year plan for implementing the Instructional Operations Mechanism is summarized in Table 4. It will be seen from the table that all structures within the mechanism will have been taken through at least second generation field testing and all personnel will have been prepared to implement the program at full scale operation.

Linkages with Other Operational Mechanisms

The Recruitment and Admissions Structure:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS.

TABLE 4. The 5-Year Plan for the Development and Implementation of the Instructional Operations Mechanism.

Schedule	Structure				
	Recruitment and Admissions	Competency Facilitation in the General Studies Phase	Competency Facilitation in the Clinical Studies Phase	Competency Facilitation in the Intern Phase	Certification
YEAR 1	Development for first generation field trial Carry out 1st generation field trial	Development for first generation field trial	Advanced Planning	Advanced Planning	Advanced Planning
YEAR 2	Development for second generation field trial Carry out 2nd generation field trial	Carry out 1st generation field trial Development for 2nd generation field trial	Development for first generation field trial	Advanced Planning	Development for first generation field trial for PRELIMINARY certification Carry out 1st generation field trial

TABLE 4. Continued

YEAR 3	Full scale implementation-round 1 Refinement on the basis of full scale implementation	Carry out 2nd generation field trial Development for full scale implementation Prepare personnel to handle full scale implementation	Carry out first generation field trial Development for 2nd generation field trial	Development for 1st generation field trial	Development for 1st generation F.T. for INITIAL certification Development for 2nd generation F.T. for PRELIMINARY certification Carry out both F.T.'s
	Fully operational	Full scale implementation-round 1 Refinement on the basis of full scale implementation Prepare personnel to handle revised full scale implementation	Carry out 2nd generation field trial Development for full scale implementation Prepare personnel to handle full scale implementation	Carry out 1st generation F.T. Development for 2nd generation F.T.	Development for 1st generation F.T. for CONTINUING certific. Development for 2nd generation F.T. for INITIAL certification Carry out both F.T.'s Refine PRELIMINARY certification procedures on the basis of further testing & the history of students in advanced stages of the program
YEAR 4					

TABLE 4. Continued

	Fully operation	Fully operation	Full scale im-plementation-round 1	Carry out 2nd generation F.T.	Development for 2nd generation F.T. for CONTINUING certific.
YEAR 5			Refinement on the basis of full scale implemen-tation Prepare personnel to handle revised full scale imple-mentation	Carry out 2nd generation field trial Development for 2nd generation field trial	Carry out the F.T. Refine INITIAL certifica-tion procedures on the basis of further testing and the history of stu-dents in advanced stages of the program

1. Information from the Program Management mechanisms regarding the number of students that can be accommodated by the program in a given year.
2. Materials describing the program that can be used for general distribution purposes from the Dissemination mechanism.

-THAT WHICH FLOWS TO OTHER SYSTEMS.

1. A record of the students admitted to the Program Management mechanism.
2. Materials collected on all students admitted to the Instructional Operations mechanism.

The Competency Facilitating Structure at the GENERAL STUDIES Level:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS.

1. An intensive orientation to the GENERAL STUDIES phase of the program by the Dissemination mechanism.
2. Information from the Program Management mechanisms as to the staff sponsors that are available and the number of students which each can accommodate.
3. Training from the Instructional Development mechanism to carry out the role of sponsor.
4. Information (on call) from the Information Management system on the background, interests, experiences, capabilities, etc. of each prospective teacher, where they are in the program, their history of experience in the program, their objectives, etc.
5. The instructional materials and/or learning experiences from the Instructional Design and Development mechanism that are to be used by students in the GENERAL STUDIES phase of the program.
6. Training from the Personnel Development mechanism to carry out the on-line instructional functions within the GENERAL STUDIES phase of the program.
7. Data from the Data Generation mechanism as to the effectiveness with which the GENERAL STUDIES program is fulfilling its objectives.

8. Data from the Data Generation mechanism as to the effectiveness of each learning experience within the GENERAL STUDIES phase of the program.
9. The supplies, equipment and facilities needed to carry out the instructional program within the GENERAL STUDIES phase.

-THAT WHICH FLOWS TO OTHER SYSTEMS.

1. Information to the Program Management mechanism as to sponsor load.
2. Information to the Instructional Design and Development mechanism as to the effectiveness of the foundations experiences as a whole, as well as each of the experiences individually.
3. Updated information on each student to the Information Management mechanism.

The Competency Facilitating Structure at the CLINICAL STUDIES Level:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS. (The same as in support of instruction at the GENERAL STUDIES Level.)

-THAT WHICH FLOWS TO OTHER SYSTEMS. (The same as that which flowed from the GENERAL STUDIES phase of the program.)

The Competency Facilitating Structure at the INTERN Level:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS. (The same as in support of instruction at the GENERAL and CLINICAL STUDIES levels.)

-THAT WHICH FLOWS TO OTHER SYSTEMS. (The same as that which flowed from the GENERAL and CLINICAL STUDIES phases of the program.)

The Certification Structure:

-THAT WHICH IS NEEDED FROM OTHER SYSTEMS. Total performance records, reported in a format that is summative and easily comprehended, from the Information Management mechanism.

-THAT WHICH FLOWS TO OTHER SYSTEMS. A record of the actions taken by the certification structure to the Program Management mechanism.

CHAPTER 10

THE SUPPORT MECHANISMS

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Teaching Research

Introduction

Four general purpose support mechanisms have been designed into the program: (1) an Information Management mechanism; (2) a Data Generation mechanism; (3) a Cost Accounting mechanism; and (4) a Staff Selection and Development mechanism. By design these mechanisms are to serve all other mechanisms in the program. All four are required in support of the instructional mechanisms, the program management mechanisms, and the change-over mechanisms. They are also required in support of themselves: the Information Management mechanism, as an example, requires information storage and retrieval services, research and evaluation services, staff selection and development services. It must also be costed.

Operationally, while functioning somewhat interdependently, each support mechanism has its own sphere of responsibility. The Information Management mechanism is responsible for helping all other mechanisms specify their information needs, design and over-all information management system that will fulfill these needs, and then operate the system. In the early stages of implementation it is anticipated that much of the information within the program will be hand-managed. As program development continues, it is anticipated that there will be a gradual shift from a hand-managed to a computer-managed operation. It is likely, however, that a sizeable proportion of information functions within the program will always be hand-managed.

The Data Generation mechanism carries much the same kind of responsibilities that the Information Management mechanism carries. It too must help each mechanism in the program identify the research and evaluation needs it has, help design the research and evaluation activities needed to meet those needs, and then either carry them out or help personnel within the mechanism being served carry them out. In the early stage of implementation it is likely that most of the activity of the mechanisms will be directed to that which has been called "developmental" evaluation. As implementation proceeds, however, an increasingly larger share of the

¹Mr. Thomas authored the section which describes the Information Management mechanism; Mr. Nelson the Data Generation mechanism; and Mr. Sell the Cost Accounting and Staff Selection and Development mechanisms.

energy available to the mechanism will be directed to research and "summative" evaluation activities. Implicit in the philosophy underlying the mechanism is the idea that the bulk of evaluation-research activities to be carried out within the program will be done by the staff responsible for the various dimensions of the program rather than by the Data Generation staff. As such, staff within the Data Generation mechanism are seen primarily as resource people on whom staff from other mechanisms can draw in carrying out the data generation functions that they deem essential.

The Staff Selection and Development mechanism shares many of the same characteristics of the Information Management and Data Generation mechanisms. It too must help each mechanism in the program identify the staff development needs that it has, design a program to meet those needs, and carry it out. As used in the present context the concept of staff selection and development includes coordination of selection and placement, in-service training programs, and staff welfare and benefit programs. In the early stages of implementation staff development functions will center primarily around staff selection and placement, training to carry out developmental functions, and basic staff welfare and benefits policies. In the later phases of implementation it is anticipated they will focus upon preparing staff to carry out full scale program implementation. A major thrust within this latter effort will be the preparation of public school personnel to serve as clinical supervisors in the clinical and intern phases of the program.

The Cost Accounting mechanism functions somewhat differently than do the other mechanisms in the general support cluster. While it provides services in the form of continuously updated accountings of resources available and resources consumed, it tends to function more aggressively than the other support mechanisms in that it specifies cost information needed and then approaches mechanisms to obtain it. It is anticipated that personnel within each of the operational mechanisms will provide the basic information on resource utilization needed by the costing mechanism but that specially trained personnel will carry out the costing and accounting functions per se.

One other general support mechanism is required to make the proposed program fully functional, namely, a Facilities, Equipment and Supply mechanism. It will be recalled that this function appeared in the original list of functions to be performed within a ConField based program, and that it appeared in the diagram which illustrates the relationship between functions (See Figure 13, p. 36), but since OCE and its participating school districts have already established mechanisms to carry out these functions a separate mechanism was not planned.

The four general support mechanisms discussed above are described in the pages which follow.

Information Management Mechanism

Mission

The design, implementation and maintenance of an information system which will permit data capture, processing and distribution in the most timely, efficient manner possible for all mechanisms contributing to the proposed program.

Tasks

- I. Data capture and reduction
 - A. Train individuals in methods of interacting with the information management system.
 - B. Design and implement software systems which will allow such interactions.
 - C. Design and implement formats for information capture and dissemination.
- II. Systems analysis for other missions
 - A. Definition of objectives for computer implementation within other mechanisms.
 - B. Analysis of information requirements and information flows within and without other mechanisms.
 - C. Documentation of informational needs of all mechanisms.
 - D. Establishment of priorities with respect to how much will be computerized within the given time estimates.
- III. The education and re-education of potential and current users.
 - A. Carrying out training in the use of remote terminals connected to the computer system.
 - B. Continuing demonstrations aimed at demonstrating current capabilities.
 - C. Updating information to current and potential users as changes are made to the information system

IV. Research on information processing techniques

- A. Investigation of other operating computer systems throughout the country in terms of their utility for the proposed program.
- B. Modification of the current information system to reflect new and significant innovations provided by both the program staff and the computer industry in general.

V. Dissemination of pertinent information

- A. Information collected by subscribing to abstracting services.
- B. Provision of summarized information periodically to interested individuals and on demand by interested individuals.

As an example of a specific task to be accomplished the information needed on each student in the program will be outlined.

1. Identify the critical information to be collected for each student.
2. Identify the time delay allowable for the collection of such information.
3. Establish means by which such information can be collected, focusing especially upon procedures which permit students to provide data on their own performance.
4. Specify the classes of student information to be processed by hand and by computer.
5. Continually evaluate the information collected on students from a utility point of view.

Rationale

The inclusion of an information management mechanism within the proposed model is based on several assumptions: 1) implementation of the proposed program will require quantities of information never before generated; 2) the information generated is to serve specific purposes; and 3) if the information generated is to be effective its capture, processing and dissemination must be done in a timely and efficient manner. A computer based information management system is one means of handling the problems of quantity, timeliness and efficiency.

Although it would be desirable to implement all phases of information collection and distribution within the context of a computer system, time and resource allocations will not permit this to occur. It is anticipated that in those instances where hand systems complement the computer system the actual collection, storage and distribution of information will be handled by the individual mechanisms involved. In all cases decisions as to computer or hand processing will have to be made on the basis of the criticalness of data availability upon demand, the extent to which a class of data will be used, cost of reduction, and storage, etc.

Personnel

The professional personnel needed to operate the mechanism are of three types: computer programmers, systems analysis, and an information system manager. Computer programmers will most likely have attained a bachelor's degree in either business or mathematics. Their major function would be the implementation of specific problem-oriented programs. They would further be charged with the complete documentation of such programs. Their experiential backgrounds may be quite limited, although it would be beneficial to have had some experience in the use of time-shared computer systems. Previous experience with machine and/or assembly level languages, and at least one higher level compiler language, would also be desirable. For purposes of work assignment within the proposed program, it would be desirable for one of the programmers to have had experience with statistical and evaluative models.

Traditionally, within the industrial setting, an individual becomes a systems analyst after serving a variable amount of time as a programmer. Typically then, a systems analyst would exhibit all of the characteristics described above as desirable for a programmer, but would be expected to be able to interact with professional staff at all levels in determining information needs. He would also be expected to document the information systems developed and supervise the work of programmers.

The information systems manager typically will have experienced the programmer and systems analyst roles. Also, he will most likely have had experience in supervising analysts and programmers and in designing a computer based information management systems. It is anticipated that a person with such background will be needed in the role of mechanism director. Since the mechanism will need to interface with hardware systems within the state and region, past experience with time-sharing systems within the immediate or general geographical area would be desirable.

When considering personnel to operate the mechanism it should be kept in mind that the responsibility of mechanism personnel lies in helping to identify what information will be collected, what the acceptable turn-around time will be for the collection and dissemination of that information, and who the information is to be collected from and disseminated to. Personnel within the mechanism assume no responsibility

for why such information is to be collected or how it will be used.

As designed, the information management mechanism must rely on several kinds of highly trained and skilled individuals not usually found within the typical university or college environment. In order to obtain such types of individuals the proposed program will most likely have to recruit from private enterprise, and in order to be successful with such recruitment, the salaries must be commensurate with salaries in the private sector.

Structure

Although the personnel outlined above will comprise the core of the information-management staff, it is anticipated that for efficient operation they will be divided into smaller teams. Each team would be composed of one systems analyst, one programmer and whatever backup personnel needed. Each team will be assigned to a specific task, such as the design and implementation of an information system to support the data generation mechanism. It would be their responsibility to interact with personnel from the other mechanisms in an attempt to define the informational needs of those mechanisms, design and then implement an information system to handle those needs. Above and beyond the design of systems to meet individual mechanism needs is the design and implementation of the overall system that incorporates all of the sub-parts designed and implemented by the two-man teams. Responsibility for the design and implementation of the generic system lies with the mechanism director.

Composition

It is anticipated that individuals currently employed by the State System of Higher Education will be asked to contribute some portion of their time and knowledge to the overall development of the generic information model. Due to the fact that the proposed program will be imposed upon an already existing college environment, it is recognized that individuals within the existing environment will influence in the overall development of the information mechanism. It is also recognized that the Oregon State System of Higher Education is currently attempting to implement certain computer based administrative functions which will influence the proposed program. It is critical, therefore, that any generic system developed at OCE be able to interface transparently with systems currently being developed within the State System of Higher Education as a whole. A close and continuing interaction is therefore anticipated with college administrators, college professional staff, State Department of Education staff, officials of the State System of Higher Education, and the students who will be involved within such a program. These individuals have not, however, been included as a part of the professional team which comprises the information-management mechanism.

Equipment

Acquisition of third generation computer hardware for exclusive use within the proposed program is not anticipated at this stage of development. It is anticipated that the director of the information-management mechanism will be able to locate a time-sharing service within the Northwest or West Coast area from which time may be rented for the information-management mechanism's needs. Although many arguments, both for and against a computer acquisition can be raised, the rental of computer time seems the most prudent approach considering budgetary constraints. It is quite realistic to assume, however, that within the time period given for development of the proposed program, specific information will have been generated which may aid in future determinations of computer systems which will be suited to program use.

Implementation

The overall program implementation schedule calls for preliminary field trial runs on parts of the new curriculum after one year and operational field trial runs after two. Given such a schedule it becomes imperative that the mechanism be fully staffed at the beginning of the project. It is anticipated that the level of activity within the mechanism will begin high and increase only slightly over the five years of the project's duration -- even though the level of activity directed toward any one mechanism will positively accelerate and then decline as time goes on. By the end of the fifth year of the project it is anticipated that the generic information management mechanism will be fully operational within the budgetary and technical constraints that exist.

Once established two options are open to the operators of the proposed program. The first is the employment of a skeleton staff to maintain the developed system. It is anticipated that two individuals full time, assisted by two half-time graduate students, would be able to maintain the system at a fully operating level. This would not permit future developmental or up-grading efforts to take place however. In order to accomplish the further development two or three additional staff would have to be added. Although the budgetary realities suggest that two full time individuals, plus two half-time graduate assistants, would be the most that could be expected, it seems unrealistic to expect an information system as complex as that envisioned by a ComFidd based program to remain stable for any great length of time. This is due primarily to the rapid increases in knowledge and technology within the information processing area, and to the increased utilization of such a system as more individuals become familiar with it and place greater demands on it.

Linkages with Other Operational Mechanisms

It is anticipated that every mechanism identified within the proposed based program will interact with the information-management mechanism to some degree. The nature and extent of the interaction will be defined through joint planning of staff of the information-management mechanism and all other mechanisms. As these requirements are defined procedures will be phased into operation that will permit the collection and transmission of the data needed.

The Data Generation Mechanism

Overview

Implementation of a complex, data dependent, instructional program requires complex data collection procedures which interact with all dimensions of that program. In such a program, for example, a student will need to know about all available alternatives in the negotiation process and the implications of each for his success; project personnel will be concerned with the appropriateness of specific and general objectives; lay people in the communities served will need to make decisions about desired effects within their communities; etc. Data generation to facilitate effective "on-line" decision-making is a continuous process which permeates the entire structure of such a program, eventually effecting everyone involved with its implementation.

Specifically, the evaluation function of the mechanism is charged with responsibility for providing decision-making bodies with information related to a given value that will improve the quality of decisions to be made. The intent is not to imply that evaluation will ensure perfect decisions, but rather that decisions or judgments based upon appropriate data will be better than chance and qualitatively improved.

The research function will focus primarily upon systematic investigation of some phenomenon or series of phenomena, employing a variety of investigative tactics, strategies and tools. Generally, both the evaluation and research functions of the mechanism will serve to aid decision-making through supplying relevant and important data. The primary differences are in the constructs upon which a specific evaluation design and a specific research design are predicated and in the different analyses and interpretations made of the data generated.

Typically, research data will explain some phenomena while evaluation data will describe phenomena or activities. Evaluation, for example, deliberately permits a complex of uncontrolled variables to operate, because doing so makes for more valid immediate operational decisions. The ability to generalize is admittedly compromised or lost. If generalizability is not aspired to, the strategy employed is reduced to determining, within the constraints of the project, the costs of correct or incorrect decisions. Conversely, the intent of research will be to control certain variables, and manipulate others, to ascertain the specific effect each may be having on some element of the project.

Mission

To provide freely and upon demand both evaluative and research data upon which instructional and management decisions may be based.

- I. Mission of Evaluation: To design and implement an evaluation program that will facilitate and enhance the corrective-adaptive posture of the program and accomplish the necessary summative evaluations for each phase and the total program.
- II. Mission of Research: To operationalize a mechanism that will facilitate identification of research questions, provide the necessary support for conducting needed and desired research and establish required data linkages in support of research functions in all stages and at all levels of the total program.

Tasks

I. Generic:

A. Evaluation

1. Assess the effectiveness of the instructional program
2. Assess the impact of the program upon the larger environment
3. Assess the appropriateness of the program and its components to learning
4. Ensure, and facilitate, collection and utilization of data to accomplish intended missions of all other components of the program; i.e., development, design, instructional operations, objectives, etc.

B. Research

1. Facilitate and aid in the identification of research problems
2. Aid in and design experiments
3. Aid in and conduct experiments
 - (a) Identify and apply resources as required, i.e., staff, subjects, facilities, equipment, etc.
4. Analyze and interpret data from experiments
5. Monitor storage and retrieval of research data

II. Specific:

A. Component Tasks for the Total Mechanism

1. Manage/Coordinate the Data Generation mechanism.

1.1 Identify all resources

- 1.11 personnel
- 1.12 equipment
- 1.13 facilities

1.2 Establish parameters of operational functioning

- 1.21 time
- 1.22 staff
- 1.23 learners
- 1.24 instructional program
- 1.25 instructional development
- 1.26 total model

1.3 Facilitate application of decision theory

1.4 Apply management models

- 1.41 P.E.R.T.
- 1.42 Gantt charts
- 1.43 management of objectives
- 1.44 transportation model

B. Component Tasks within the Evaluation Mission

1. Establish Purposes for Evaluation within each Function

- 1.1 Identify who needs what data
- 1.2 Identify when these persons need this data (Timeliness is the referent.)
- 1.3 Establish what classes of decisions are to be made, i.e., administrative, personalization, facilities, etc.).

2. Define the Evaluative Context

- 2.2 Identify the personnel and facilities required (this becomes the definition of the operational context or environment.)
- 2.3 Identify the processes utilized (make visible the activities of the decision-making body, whether it be staff, administration, student, pupil, etc.).

3. Identify Appropriate Data Collection Procedures

3.1 Identify the origin of needed data

- 3.11 teachers
- 3.12 students
- 3.13 pupils
- 3.14 subject area
- 3.15 instructional staff
- 3.16 management staff
- 3.17 other management functions
- 3.18 other instructional functions

3.2 Determine the most appropriate form for the desired data

3.21 recorded

- 3.211 media application
- 3.212 paper and pencil instruments

3.22 non-recorded

- 3.221 one-shot observations
- 3.222 repeated measures

3.3 Determine criteria to be applied to data collection procedure

- 3.31 error reduction
- 3.32 quantifiability
- 3.33 validity
- 3.34 reliability
- 3.35 automation
- 3.36 economy

3.4 Determine if sampling is necessary

- 3.41 sampling not required
- 3.42 identify appropriate sampling
 - 3.421 time
 - 3.422 situation
 - 3.423 student
 - 3.424 pupil
 - 3.425 instructor
 - 3.426 instructional system
 - 3.427 item
 - 3.428 discipline

4. Facilitate or Develop Instrumentation

4.1 Identify measures to apply

- 4.11 standardized test
- 4.12 interviews
- 4.13 critical incident
- 4.14 questionnaire
- 4.15 rating scales
- 4.16 performance measurement techniques
- 4.17 unobtrusive measures
 - 4.171 indirect observation
 - 4.172 cumulative records, etc.

4.2 Identify criteria for selection of measure(s)

- 4.21 criterion testing
- 4.22 normative testing
- 4.23 diagnostic testing
- 4.24 predictive testing

4.3 Identify measurement implementation procedures

- 4.31 when observations are to be made
- 4.32 where observations are to be made

5. Define/Determine Most Appropriate Data Processing Procedures

5.1 Select relevant data reduction and analysis techniques

- 5.11 coding
- 5.12 statistical analysis
 - 5.121 descriptive
 - 5.122 inferential

5.2 Selection of an appropriate experimental design (where appropriate)

6. Select Appropriate Distribution Procedures

6.1 Accommodate operational constraints

- 6.11 credibility of data
- 6.12 timeliness requirements
- 6.13 necessary format for manageability

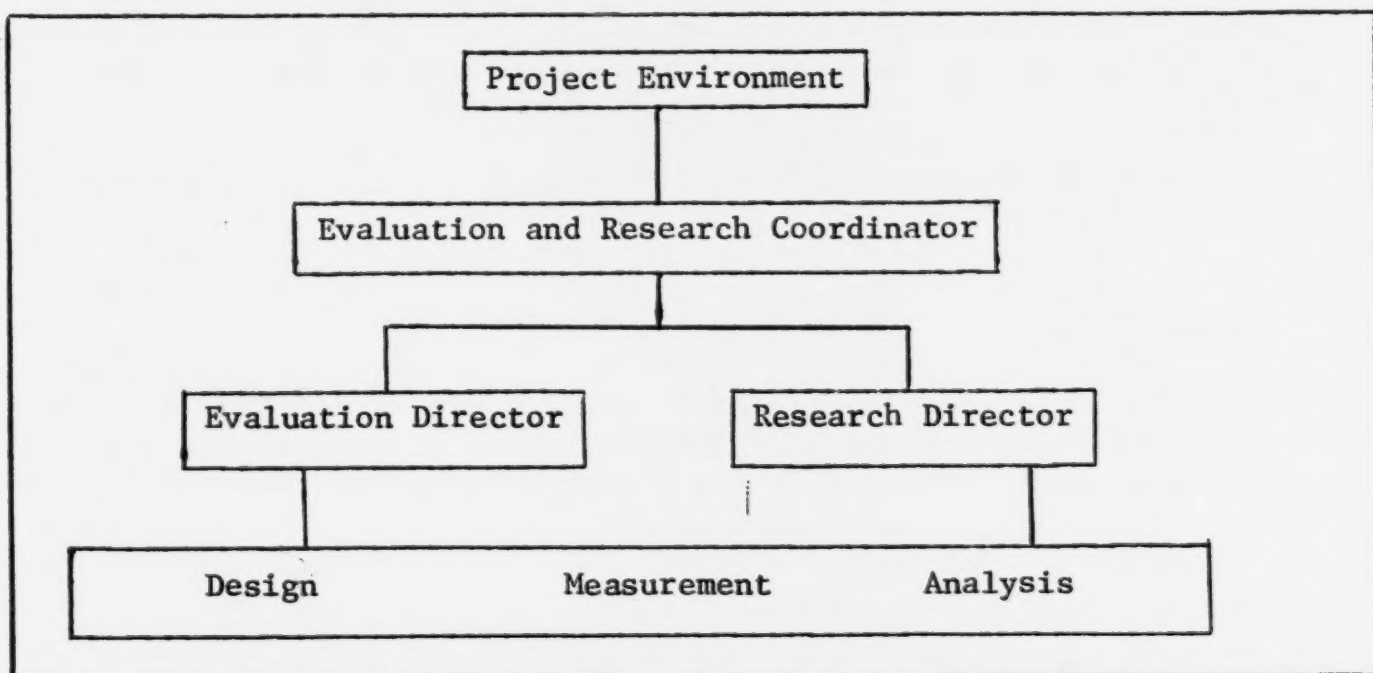
6.2 Identify who will use the data

C. Component Tasks Within the Research Mission

1. Specific research tasks are indeterminate at this time, as they will be almost exclusively emergent from evaluation procedures and program operations.
2. The orientation of the total program to exhaustive use of various types of data for various purposes suggests that it will have an excellent capability to support research, i.e., simply having a data generation and manipulation mechanism will greatly enhance the probability and feasibility of conducting research.
3. As presently proposed, the research mission does not intend to conduct a great deal of research, but rather will support research by individuals. However, for those problems which may have a widespread effect on the project, and are requested by project directors, the research function will physically conduct the necessary experiments. Most often, however, it will support research projects which focus on project needs but which are conducted by individual staff members.

Structure

A single structure, operating at four levels, is proposed. The structure is diagrammed as follows:



The total project environment, the broadest level, will serve as primary input. The intent here is to show that the Data Generation mechanism will function in every element of the program. At this level, sensitivity to information requirements of each member of the program coalition will be emphasized. Individuals within the constituency will serve an evaluation and research function whenever they make their information needs known, request evaluation of a specific element, or request assistance with a research problem. Additionally, as noted earlier, the Data Generation mechanism will be continually identifying problems within this environment with the possibility that some of these problems will not have been identified within the constituency.

The second level of activity will be manifest in a mechanism coordinator who will be responsible for obtaining the necessary resources (personnel, information, subjects, etc.) from the environment for operation. His primary task will be to ensure involvement of individuals across the total model, perhaps the key element in the proposed Data Generation mechanism. For example, evaluation problems are almost completely determined by the context in which a particular evaluation study is conducted. Many people should be involved in its definition, especially those who need the emergent data to improve their decision-making capability. It is also very important that the evaluation mechanism refrain from making value judgments about any specific operation. Therefore, since value judgments are made explicit in the selection and definition of evaluative problems, and in the development of procedures for a study, it is imperative that persons responsible for a program be closely involved in specifying what is to be evaluated and why it is to be evaluated.

In direct support of the mechanism coordinator will be a Director of Evaluation and a Director of Research. Both will have at their disposal a team of design, measurement and analysis specialists. While the team of specialists will be responsible administratively to the Evaluation and Research Coordinator they will be responsible operationally to the Directors of Research and Evaluation, that is, each director will be free to call upon members of the support team as specific tasks arise.

Composition

The complexity of the model, the continuous need for diverse types of information, and the interchanging roles of individuals within the model will require wide involvement in the Data Generation mechanism.

At varying points in time, depending upon the task at hand and the operational context, individuals and groups from the community served, public school teachers and administrators, college staff, State Department of Education staff, students, and pupils will function either as a source for data or as recipients of data to facilitate more effective decision-making.

Because the level of involvement by coalition constituency will fluctuate radically, primarily due to changing data needs, it would seem prudent to include only a cadre of trained Research and Evaluation personnel within the mechanism. The structure and composition proposed are designed to give the mechanism an elastic capability such that every element of the model requiring data may be adequately served. This cadre will be constituted during the first year of operation and will remain a constant throughout the remaining four years of the implementation phase. It will continue to function in basically the manner specified throughout the life of the program.

Linkages With Other Operational Systems

A critical operation within the Data Generation design is a process for identifying the data needs of each mechanism within the project. Some form of interaction, although at varying levels, is expected to occur between the Data Generation mechanism and every other element of the project; i.e., Data Generation will require information from each Instructional Management system, each Support system and each Program Management system.

Needed from every other component of the model is information about who needs what data, when they need this data and what they intend to do with the data.

With this information, the Data Generation mechanism can provide useful and relevant data to every other component of the project, including that requested and any other data about residual or side effects observed.

Because of the pervasive nature of the Data Generation mechanism, precise linkages with other systems are undefinable at this time. Instead, the design facilitates interaction with every other component to determine their data needs, through which the nature and extent of the necessary linkage can be identified. Not even a first approximation of the required linkage can be made until such interaction has occurred. These needs, of course, will be subject to revision when the project is operationalized and the precise nature of needed data is established.

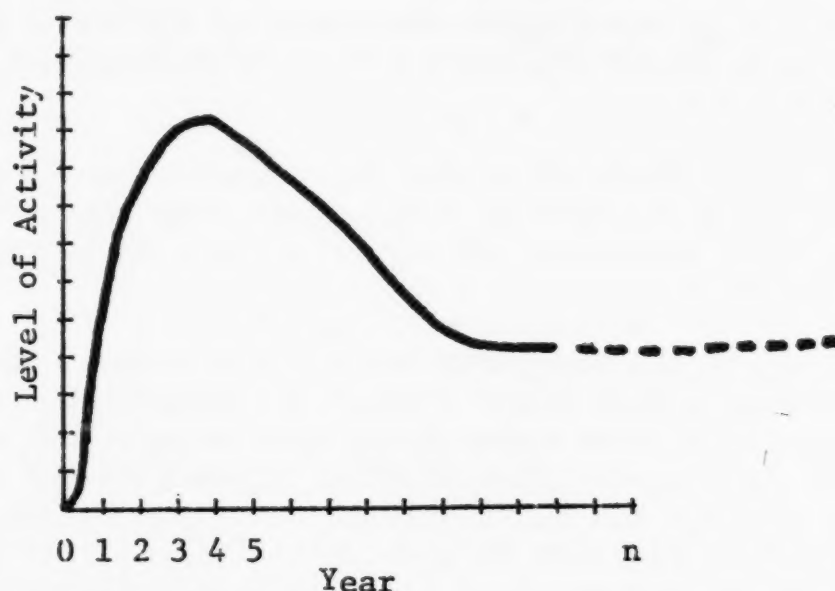
Because of the close relationship between data generation and its distribution, an especially close working relationship will need to be

established between the Data Generation mechanism and the Information Management System. The primary function of the Data Generation mechanism is to ensure that useful and appropriate information is collected, while the Information Management System is primarily concerned with the storage, retrieval, distribution and arrangement of that information.

While the relationship between Information Management and Data Generation is extremely close, it is not necessarily complex. Both mechanisms are oriented to selective information processing and utilization. It will be important, as the project is implemented, to clearly delineate the tasks of the two mechanisms in an effort to remove as much redundancy as possible.

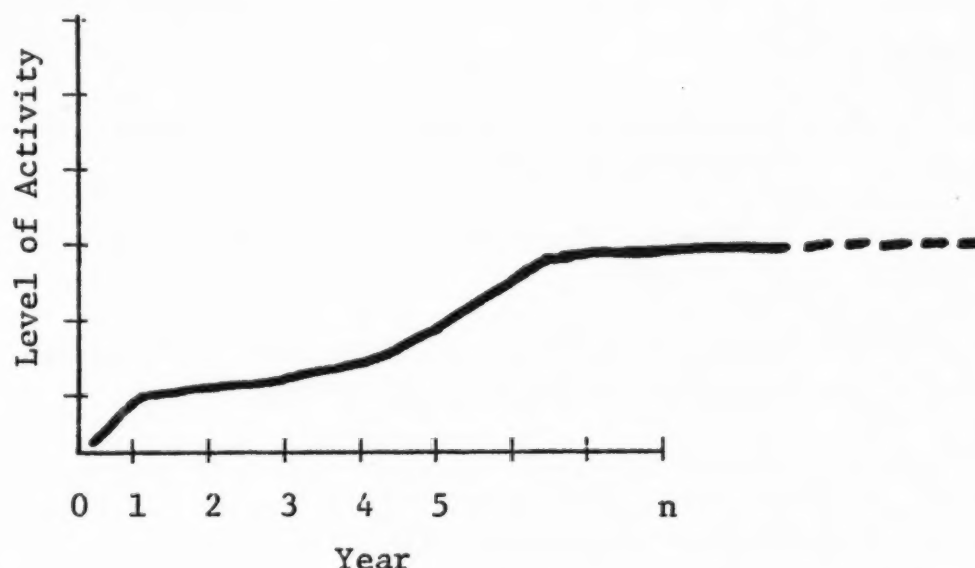
Implementation

It will be imperative that the evaluation function be operationalized concurrently with the start of the program. This will require that the mechanism coordinator be available at the outset, with the other identified members of the cadre joined soon thereafter. The evaluation function will have a heavy front task loading, necessitated by an early need to determine what evaluation information is either desirable or needed and to design the instruments and analysis procedures required to obtain it. The evaluation function should begin to stabilize at approximately year three when it will assume a maintenance posture, i.e., processes and procedures are somewhat more clearly defined. Schematically, it will be implemented as shown below:



At year five, the majority of the desired instructional systems will be designed and field tested. Evaluation at that point will focus primarily upon summative dimensions, i.e., efficacy of objectives, impact, effectiveness, etc.

The research function will be implemented in almost a reverse fashion. As indicated earlier, it is assumed that the majority of research problems identified will be emergent from evaluation processes. Additionally, it would seem prudent not to confound initial operations with tightly controlled research studies. Therefore, the research function will have a relatively light front loading. It will probably grow rapidly during later years, with any increase in size depending entirely upon the desired shaping procedures for the total program, i.e., as values are assigned to variables identified. As mentioned earlier, the data mechanisms of the total model afford an excellent opportunity to support a diverse and extensive research program with the full research potential probably not known until sometime after the project is started. Implementation of the research function is shown schematically below:



A key element in the program is its dependence on relevant, meaningful data. Consequently, the Data Generation mechanism will be expected to operate throughout the life of the program--from its inception until the program may be discontinued.

Emphases will shift periodically as the project moves through successive stages of development. Initially, a major portion of the activities of the mechanism will focus upon the Instructional Management mechanisms, especially those related to Instruction Design and Development. As the required systems are refined (outcomes become predictable) the emphasis will be reoriented to monitoring the total program and summative evaluation.

The Cost Accounting Mechanism

Mission

To specify estimated costs of program development; to account for the actual costs of program development; to display cost data in an appropriate format for evaluative/comparative purposes, i.e., cost-effectiveness and cost-benefit analyses; to systematically and periodically advise program mechanisms of resources expended as related to resources budgeted; and, to prepare costing reports periodically and in a format required by program mechanisms or by local, state, or national agencies.

Tasks

1. Interface with those functions responsible for the planning/budgeting process;
2. Determine the specific proposed resources required by the program;
3. Identify and/or calculate the cost of resource projections proposed by each program mechanism;
4. Record the cost of proposed resource utilization by (a) type of cost, (b) operating mechanism, and (c) the instruction/program objective being supported;
5. Provide for storing and retrieving the cost projections;
6. Identify and/or calculate the cost of resources expended by each program mechanism;
7. Record the cost of resources expended by (a) type of cost, (b) operating mechanism, and (c) the instruction/program objective being supported;
8. Provide for storing and retrieving the costs expended by the program;
9. Identify and collect cost data required by program mechanisms in the evaluative process of comparing costs with program effectiveness, efficiency, appropriateness, and/or benefit;
10. Analyze cost data to facilitate adaptive/corrective decisions regarding the expenditure of resources by operating mechanisms in the support of program objectives;

11. Synthesize cost data in a format readily usable in adaptive/corrective program decision making;
12. Identify the cost information requirements needed by each program mechanism for the purpose of regulating the expenditure of resources within the parameters of the projected (budgeted) resources;
13. Collect, organize and display the cost of resources expended by each mechanism in relation to the distribution of resources budgeted for each mechanism;
14. Advise each mechanism--periodically and systematically--of the resources expended and their cost;
15. Request adaptive/corrective actions as required from program mechanisms in relation to the expenditure of resources;
16. Identify the requirements for costing reports from program mechanisms for outside of the central OCE Coalition;
17. Establish, maintain, and adapt a costing report program which will satisfy the needs of the program;
18. Prepare costing reports in an appropriate format to meet the stated requirements;
19. Route costing reports to the specific mechanism or agency requesting the report.

Rationale

The economic realities facing higher education today demand that the resources required to implement and develop a teacher education program be accounted for in a systematic and reliable fashion. Increasing public awareness and concern over tax monies to support institutions of learning make such accountability mandatory. Private business and industry deal in products having a definable cost in producing and marketing, and depend upon supply/demand relationships for their price and sales volume. The educational enterprise has historically been subsidized to conduct its activities. They have not been publically accountable for the development of products (the learners) or specific costs involved with developing learners with definable qualities. Until costs can be accounted for in such a way that instruction can be so evaluated the public will be asked to provide for an educational process without being fully aware of the nature of their investment or the precise returns.

The proposed program incorporates procedures permitting such accountability. The model on which the program is based requires that

costs of the program be accounted for in a mode readily permitting comparisons of instructional efficiency, effectiveness, appropriateness, and benefits with resources utilized in program operations. As such, the program will require more than traditional cost accounting practices used in educational agencies.

With its systematic orientation, the program further requires that cost information be a primary source in decision-making relative to program operations, and that these decisions reflect needed adaptation/correction of the program's directions.

Structure

The Cost Accounting mechanism will include a three-level structure: 1) A liaison structure to carry out consultations with those who are responsible for the planning and budgeting functions in the proposed program; 2) A consulting structure interacting with all mechanisms as to (a) the projection of cost data, and (b) the analysis of cost data in relationship to the operation of each mechanism; and 3) An internal operations structure identifying, records, analyses, and reports proposed and actual costs of resources utilized throughout the program.

Functions

THE IDENTIFICATION AND SPECIFICATION OF COMFIELD PROJECTED COSTS: The anticipated resource utilization of all program mechanisms must be projected for purposes of supporting (funding) program development. The process must include detailed descriptions of the mechanisms, the resources needed to carry the mechanisms, and reality factors which may facilitate or impede the operation of the mechanism.

THE ACCOUNTING OF ACTUAL RESOURCE COSTS: Resources expended to carry out the development of the program must be identified and recorded in a format conforming both to program requirements and those policies and practices of local, state, and/or national agencies.

THE DISPLAY OF COST DATA: Cost data must be retrieved and presented in the most effective mode to facilitate the management of program mechanisms.

BUDGET CONTROL: Operating mechanisms of the program require up-dated and periodic information on resources expended, especially in relation to those projected (budgeted) for them.

REPORTING OF COST INFORMATION: Formal reports of the cost of resources expended in carrying out the development of the program must be prepared in appropriate formats. Either program mechanisms or specific agencies outside the program may request the reporting of program cost information.

Composition

Developing an effective program of cost accounting will require:

- 1) a specialized staff with expertise in the budgeting and accounting of program costs by objectives;
- 2) personnel knowledgeable as to the policies and practices of national, state, and/or local educational agencies;
- 3) representation from the current budgeting and accounting personnel who interface with the elementary education program at OCE;
- 4) representation from the current public school personnel who interface with the budgeting and accounting functions that are related to the OCE elementary education program; and
- 5) representation from the Oregon State System of Higher Education (OSSHE) and the Oregon State Department of Education who are closely associated with financial affairs.

Implementation

Beginning January 1, 1970, the developmental costs and implementation plan derived from the present feasibility study must be critically reviewed as to its detail, clarity, and realism. To do this will require the establishment of a task force which includes representatives from the present feasibility study staff, OCE and public schools. A clear description of the operational cost accounting mechanism must emerge from this task force.

By July 1, 1970, personnel should be identified who will implement and develop the cost accounting mechanism. As a first step in that process, a short-term training program will be established to introduce the cost accounting staff to the proposed program, the cost accounting procedures currently operating at OCE, in the OSSHE, etc.

Beginning September 1, 1970, the first year of actual implementation will begin with a full-time staff. Procedures, responsibilities, and operations will be carried out in accordance with the specifications laid down for cost accounting by the task force group specified earlier.

Beginning September 1, 1972, first year students will begin moving through operational field trials of instructional systems. A critical decision must have been reached prior to this regarding how cost analysis data will be provided to program mechanisms. Three alternatives are available: 1) a bookkeeping system (ledgers) may continue to be the primary means of storing and retrieving cost-related data; 2) a computer facility may be used periodically for purposes of storing, processing, and displaying cost data; or 3) a computer facility may be used continuously to provide storage, processing, and display capabilities for cost data related to the operating mechanisms and the instructional program. The rapid retrieval of cost data (necessary for cost-related decisions which are corrective/adaptive in nature) increases as the degree of computer utilization increases. The requirements of the program during Year 3 of development will need assessment before making the ultimate decision on this matter.

Also in the third year, cost analyses will be made more frequently and will require additional personnel capabilities for cost accounting. Therefore, in-house staff may be trained to meet those additional demands or new staff may be recruited. Such a decision, however, should be reached early in the implementation period.

Throughout implementation of the program's cost accounting mechanism, provision must be made for its integration with cost procedures currently used at OCE, the State System of Higher Education, and public schools. At the end of five years, costing operations of the program cannot be separate from OCE, but instead must be a part of it. Therefore, continued representation from OCE and the public schools must be present in the development of the Cost Accounting mechanism.

Staff Selection and Development

Mission

To select staff to carry out manpower demands of program management, instructional management, general support and changeover functions; to orient new staff to the program and functions for which they will be responsible; to establish and maintain an inservice training program for the professional development of all staff; to determine personnel policies for the rank, promotion, salary, and tenure of all staff; to provide means by which professional goals of staff can be identified, described, facilitated, and evaluated.

Tasks

1. Identify personnel capabilities needed to carry out the development of each program function;¹
2. Identify criteria for personnel selection;
3. Identify and interview prospective staff;
4. Determine the appropriate personnel to meet specified manpower needs of program mechanisms;
5. Establish and maintain a personnel orientation program which is interrelated with the recruitment program, but offers more detailed information and exposures to the program;
6. Assess general and specific personnel capabilities needed to perform professional tasks in carrying out specific program operations;
7. Specify general and specific personnel capabilities for which professional training is needed;
8. Organize a task force to design an inservice training program to meet general and specific professional training needs of staff;

¹ The outcome of this task should produce (a) a job description of what each person in each of the functions is expected to do; (b) the personal characteristics or qualities which are judged important to each job, e.g., degree, experience, commitments, personal goals, professional goals, etc.; (c) suggested salary for each job; (d) types of persons available who should be considered for specific jobs; (e) special qualifications which the jobs call for or which may not be present in available personnel.

9. Coordinate the development of an inservice training program by identifying and securing (a) program instructional staff; (b) instructional materials; and (c) instructional logistics;
10. Provide evaluation, feedback, and follow-up on inservice training program to both trainers and trainees;
11. Modify the inservice training program on the basis of feedback as to its effectiveness and clarification of the training needs within the proposed program;
12. Establish the means whereby present personnel policies and practices of the Oregon State System of Higher Education, OCE, the department of elementary education, and the public schools can be reviewed and modified wherein possible to accomodate the program ideal;
13. Solicit the recommended personnel policies and practices from staff congruent with the commitments of the total program;
14. Specify (upon approval of the OCE Coalition) personnel policies and practices which will be established and carried out;
15. Identify the professional goals of all staff; or assist staff to identify professional goals;
16. Determine those goals which directly facilitate the program (both long-term and short-term) and identify indicators which are acceptable as evidence of their achievement;
17. Facilitate the attainment of the professional goals of personnel executing program tasks.

Rationale

One significant problem in implementing the proposed program is the ability of each individual in the program to meet the responsibilities and challenges he will face. To do this will require a close fit between proposed program objectives and professional goals and commitments of staff who develop and operate the program.

The proposed program will require some unique new roles and functions on the part of both college and school personnel. As a consequence, the staff selection and development function must receive critical attention. Among other things, this requires new ways of relating to colleagues in developing and operating the program.

Research by Argyris (Human Nature & Organizational Realities, 1967) indicates that managers tend to be motivated by three basic assumptions in their behavior toward staff: that staff are oriented toward objectives, that productivity increases with rationality and decreases with emotionality, and that commitment and loyalty are fostered through directions, controls, rewards, and penalties. He has also shown that the impact of these managerial assumptions on staff performance has usually minimized personal feedback, expression of ideas and feelings, openness, and risk-taking, and maximized negativism, invertedness, defensiveness, and inflexibility. In short, Argyris has demonstrated that the application of the traditional personnel principles has tended to result in low interpersonal competence within organizations.

In the proposed program, there is a commitment to overcome negative consequences typically associated with traditional management procedures. Two steps are being taken in this regard:

- 1) the utilization of management practices designed to maximize personal feedback, expression of ideas and feelings, openness, and risk-taking and minimize negativism, invertedness, defensiveness, and inflexibility; and,
- 2) the initiation of staff selection and development procedures which hold that the growth and development of each staff member taking part in the program is of primary value.

In light of the kinds of demands to be made of staff in the proposed program, the aim of staff selection and development is to bring about a high degree of individuality, trust, competency, and internal commitment in all staff. The realization of this aim will require careful balance between staff selection, job design, and management procedures. All will need to be focused on promoting productiveness, satisfaction, and challenge within the execution of the proposed program.

Structure

A two-level structure: (1) that which determines and executes personnel policies and practices within the OCE Coalition, and (2) that which prepares personnel to function proficiently in performing program management, instructional management, and general support tasks.

Composition

A director of staff selection and development will be primarily responsible for managing the operational design, implementation, development, and operation of the functions described herein. Therefore, the director must have experience in and a close working relationship with the OCE Coalition personnel programs. An additional direct responsibility which the director will have is the identification, facilitation, and

evaluation of staff professional goals which support the capability to effectively and efficiently carry out the program.

Assisting the director will be:

- 1) a personnel specialist in the recruitment and selection of staff;
- 2) a personnel specialist in the orientation and training of staff;
- 3) a cadre of staff trainers who also have responsibilities for designing and developing the functions which carry out (a) instructional management tasks, (b) program management tasks, and/or (c) general support tasks; and
- 4) consulting representatives from the OCE Coalition (college and schools), the State Department of Education, and the Oregon State System of Higher Education who have ongoing responsibilities for personnel programs in their respective areas.

Implementation

Beginning January 1, 1970, a staff selection and development task force will design the operations for implementation. The work of the task force must be completed by June 30, 1970, when first level operations will begin.

Beginning July, 1970, short-term, inservice training programs must be developed and carried out in order to prepare staff for a September 1, 1970 schedule of implementation for all functions.

Beginning September 1, 1970, staff selection and development will carry out the first year of operation. It must be fully staffed at this point to accommodate the developmental demands of the program staff.

Throughout the five year implementation effort there will remain continuous levels of personnel selection and development activities. The most critical demands for staff selection, orientation, and training, however, will begin July 1, 1970, and continue through the first two years of development. This demand should then level off until the fourth and fifth years. In these years an increase in the demand on the Staff Selection and Development Mechanism is forecast, for at that time the teacher education program will approximate a fully operational level. A special need will arise at that time for school based staff to serve as supervisors in the Clinical Studies and Intern phases of the instructional program.

Facilitating the professional goals of all program staff will require review, analysis, and recommendation procedures early in the development of ComField. These activities will need to continue, but primarily for program evaluative purposes (as contrasted to design, development, and implementation). Once implemented, personnel evaluations will be continuous and must be coordinated with all functions.

CHAPTER 11

PROGRAM MANAGEMENT MECHANISMS

Dale G. Hamreus
Teaching Research

Three broad functions must be established and carried out if the over-all program is to be adequately managed. These functions include policy creation and adoption, program execution, and program adaptation. The policy creation and adoption function establishes and reviews policies that guide the program; the program execution function carries out the several operations required to accomplish the mission of the program; and the program adaptation function is that which allows the program to continuously look at itself and to make necessary adjustments that permit it to more effectively accomplish its goal. The mechanisms necessary to accomplish each of these three management functions are described in detail in the pages that follow.

Before describing these mechanisms a brief discussion of management in its broadest sense is needed. Merely to define functions that are critical to the successful management of a program in no way guarantees that a program will be successfully managed. Management is more than the sum of its parts. For management to be effective it must bring about the successful accomplishment of goals that are mutually agreeable to a collection of individuals who share in their attainment. A corollary is the principle that effective management is directly related to the extent to which all of the individuals in an establishment perceive that they are contributing in some significant way to its management.

The complexity of the proposed program may leave the reader the impression of unwieldiness and unmanageability. This is not true for while the program is extensive and complicated it is also concise. Each one of the parts and sub-parts of the program has been specified and is to be operated by a balanced and carefully united team which carries out the purpose of that particular part. Within this framework a very large degree of "dependent autonomy" is granted each team. Dependent autonomy is used here to mean that each team must yield to the broader needs of the instructional program, as determined by management, but within that framework allow major independence in pursuing and attaining its own purpose.

If program management is to be organized around teams, the most important responsibility of management is to ensure the closest possible cooperation and mutual understanding between teams. This is necessary not only because of the critical dependence of each team upon the other

for the realization of its own goals, but also because of their interdependency in the realization of over-all program goals. If a ComField based teacher education program is to be effectively managed, planning and development in the many different areas must be reconciled and coordinated with one another.¹

Another important responsibility of management is to ensure continued staff development through either opportunities for training or professional involvements which lead to the development of new competencies. The contribution of competent staff to program operation cannot be over-emphasized for regardless of the quality of program management the success of the program will vary directly with the competence of the people who operate it.

A final management responsibility, and in some ways the most crucial, is that of fiscal management. Within the framework of a ComField based program this calls for a) the preparation of budgets and long-term estimates of expenditures; b) adjusting over-all program cost estimates and expenditures in light of the fiscal needs of individual program components; and c) adjusting over-all program estimates and expenditures in light of program effectiveness and benefits data.

¹ An assumption on which the management structure rests is that management functions must be carried out by ever extending lattices of teams with team size limited to not more than eight or ten members.

The Policy Creation and Adoption Mechanism

Mission

The goal of this mechanism is to establish written policy statements that will guide program operation, management and support functions and that are acceptable to the several constituencies that comprise the program.

Several concerns must be met in carrying out this function. As the proposed program is designed it must fit within the contexts of several existing establishments, that is, as a department within Oregon College of Education and as a program within the seven cooperating school districts which make up the coalition. Each of these establishments have existing policies and policy establishing structures. Then too, the program must interact with existing state certification policies, professional agencies, and other public and private agencies. All of these inter- and intra-organizational relationships must be recognized and accounted for in the creation of program policy.

Mechanism

The structure, composition and operation of the mechanism designed to create the policies by which the program is to operate, and to bring about their adoption, are described below.

STRUCTURE. The essential parts of the policy mechanism include:

1. Personnel representing all agencies and groups necessary to the successful operation of the program;
2. Statements classifying educational needs of elementary pupils and relating these needs to the competencies desired of prospective teachers;
3. Operational definitions of the program's instructional objectives, as well as the objectives of each supporting mechanism;
4. Documentation of the resource limitations of the program, including fiscal, personnel and physical resources;
5. Physical and material facilities needed in support of policy making activities.

COMPOSITION. Since the program is to be carried out by a unique coalition of institutions it is important that the policy forming body be comprised of representatives from all institutions represented within the coalition. Moreover, since so many critical relationships must be established between these institutions individuals who are intellectually

and politically the most powerful within them, and who are sufficiently knowledgeable of their unique qualities and limitations, must be selected to serve on the policy mechanism. An assumption underlying the management of the proposed program is that it will never be able to be accomplished through signed documents of agreement that set so called "bi-laws" for operating. So many constraining factors will continually be occurring, for example, local district budget defeats, turn-over of key personnel, conflicting policies between the Board of Education and the Board of Higher Education over which no direct control can be exercised, that the only possible chance of success rests with mutual trust and understanding between individuals in the many parts of the coalition. Such mutual trust and understanding can exist only as each part can be heard and in turn can listen to the other. This two way exchange must be accomplished in the policy mechanism if adequate operational policy is to be created and adopted.

Membership in the Policy Creation and Adoption mechanism should be drawn from the following agencies at approximately the proportion shown.

<u>Agency</u>	<u>Proportion of Membership</u>
College	
- Academic Department Staff	20%
- Elementary Education Majors	15%
- Administration	10%
Teaching Research	10%
Schools	
- Supervising Teachers	15%
- Administration	10%
- Board Members	5%
State Department of Education	5%
Oregon Education Association	5%
Community Representatives	5%

OPERATIONS. The membership of the Policy mechanism should be established collectively by leaders within each of the institutions within the coalition. The detailed responsibilities and duties of the Policy mechanism are to be determined collectively by the membership of the Policy mechanism and the Execution mechanism. Procedures, schedules and routines for carrying out the mission of the mechanism are to be established by the membership of the Policy mechanism. Products of the policy mechanism are subject to review by the Adaptation mechanism. Major tasks that must be accomplished include:

1. Orientation of the membership of the policy mechanism to the goals of the program; coalition membership; the nature and function of the instructional, support, management, and change-over mechanisms; limitations operating within the program,

including fiscal, personnel and coalition-unique constraints; and affiliation requirements with outside agencies and institutions.

2. Define the responsibilities of the membership of the Policy mechanism.
3. Identify the types of information needed to carry out the responsibilities specified, and define the sources through which such information can be gathered -- both within and without the program.
4. Establish operational channels for both gathering and reporting information.
5. Assemble and synthesize policy forming information.
6. Translate relevant information into policy statements and test their appropriateness against all constituencies within the coalition.
7. Publish policies and see to their appropriate distribution.
8. Establish a continuing policy creation and review procedure including a revision schedule that is adaptive to the developmental needs of the program.

Interactions with Other Mechanisms

If the Policy mechanism is to be successful in its mission it must have continuing interaction with all other mechanisms within the program. The nature of this interaction, with one major exception, tends to vary with respect to each mechanism. The exception is that it is vital to have information inputs from all mechanisms regarding problems they are encountering for the policy mechanism is able to respond to these problems only to the degree that it has information about them. In this regard it should be noted that information of this kind is not always able to be formalized; frequently the only avenues open to obtaining such information is informal personal contacts.

Mechanism specific interactions are as follows:

1. With the Program Execution Mechanism: selection of mechanism membership, advisement regarding duties and responsibilities, coordination of schedules, indications of program management problems;
2. With the Staff Selection and Development Mechanism: orientation of membership to the over-all program and conduct of specialized training when specified;

3. With the Information Management Mechanism: advisement on information networks for obtaining data essential to policy formulation, maintenance of established information flows, transmission of policy statements, collation of feedback regarding effect of policies;
4. With the Instructional Objectives Mechanism: statements of prioritized instructional program goals and indicators acceptable as evidence of the realization of these goals;
5. With the Data Generation Mechanism: empirically based data as to the adequacy of established policies, both in terms of program operation and program effects; and
6. With the Adaptation Mechanism: specifications regarding new policies needed and/or old policies changed.

The Program Execution Mechanism

Mission

The aim of this mechanism is to guide the translation of program policies and objectives into sound instructional, management, and fiscal activities that effectively and efficiently accomplish the program's goals.

This function could be likened to the nerve center of an organism. Each of the parts of the over-all program that require resource utilization must be coordinated. In order for wise decisions and effective coordinations to take place, well established linkages must be formed between all parts of the program and with all establishments beyond the program that are critical to program success. Such linkages call for communication channels that allow effective two way flow of information between the execution mechanism and all other components within the program.

Mechanism

The structure, composition and operation of the mechanism needed to fulfill the program execution function are as follows:

STRUCTURE. The essential parts of the execution mechanism include:

1. Personnel representing instruction, management and support functions within the program and students enrolled in the program;
2. Policies guiding program operation;
3. Objectives guiding program operation (these must be set forth in sufficiently clear and operational terms that program evaluation and accountability are possible);
4. Documentation of the resources available to the program -- fiscal, physical and personal;
5. Operational definitions of all instructional, management support and changeover functions;
6. Empirically based data as to program effectiveness and efficiency;
7. An information network, both formal and informal, that continuously monitors the problems occurring in all parts as well as the total program;

8. A network of assigned leadership responsibilities by which the program and all its parts may be coordinated; and
9. Physical and material facilities adequate to support the execution of the program.

COMPOSITION. In order for the program to be properly executed all parts of the program must be represented in decisions affecting the operation of the program. Toward this end a Coordinating Council, made up of persons having responsibility for coordinating the various operational units within the program, is to serve as the primary coordinating-decision making body within the program. As presently projected (see Part VI) Coordinating Council membership will include:

A. Operational¹

- An Executive Director
- An Associate Director for Instructional Objectives, Instructional Operations, Program Execution and Program Adaptation
- A Coordinator for Instructional Design and Development
- A Coordinator for Data Generation
- A Coordinator for Information Management
- A Coordinator for General Support Operations
- A Coordinator for Changeover Operations
- A Coordinator for Student Affairs

B. Advisory

- Academic Staff from the college
- Supervising teachers from the schools
- Students majoring in education
- Coalition administrators
- Consultants from management and the educational publishing industry

While the responsibility for major decision making within the program is thus shared by the persons responsible for coordinating operations within the program other levels of decision making obviously occur. Within each operational unit an essentially unlimited array of on-line decisions must be made by personnel who have to implement the program within the constraints of policy and broad operational decisions. The reverse is also true: while the bulk of major operational decisions are to be made by the Coordinating Council the Director of the program is

¹ It will be noted that the clustering of mechanisms for program operations differs from their clustering for program description. This reflects differential demands upon them for operation and their functional rather than logical alignment.

ultimately responsible for those decisions, and ultimately responsible to the institutions and agencies that have joined together in support of the program. To make such complex decision making work reciprocal trust and confidence must extend through all levels of the program. Because the coalition making up the program is so complex and far reaching in institutional involvement execution of the program cannot hope to be accomplished only through negotiated forms of signed agreements. Only the willingness of individuals who share the same convictions and ideals will enable such a program to succeed. Program execution must draw on this mutual trust and confidence, in a two way direction, if operation of the program is to overcome obstacles both within and beyond the coalition.

OPERATIONS. The membership of the Coordinating Council (Execution Mechanism) must be established by a special selection task force appointed by the current administration of the college and cooperating school districts. The responsibilities and duties of the membership of the mechanism, and the election of an executive director, are to be determined collectively by the mechanism and the current administrations of the college and cooperating school districts after the membership has been oriented to the program. The executive director is responsible for establishing procedures and schedules for the mechanism and to determine the need for additional representation and/or advisement. Products of the mechanism are subject to review by the Adaptation mechanism. Procedures and schedules for conducting such a review are to be established by the executive director and the membership of the Execution mechanism.

Major tasks and products of the Execution mechanism include:

1. Orientation of the membership of the Execution mechanism to the goals of the program; coalition membership; the nature and function of the instructional, support, management, and change-over mechanisms; limitations operating within the program, including fiscal, personnel and coalition-unique constraints; and affiliation requirements with outside agencies and institutions;
2. Define the responsibilities of the membership of the execution mechanism;
3. Establish and maintain integrated levels of relationships between and among all parts of the program, and with appropriate agencies and institutions outside of the Coalition;
4. Establish functional communication channels between and among all parts of the program;
5. Translate program policies into operational guidelines for all aspects of the program;

6. Implement new and/or modified operations based on specifications received from the Adaptation mechanism;
7. Prepare operating budgets that make maximum use of available resources; and
8. Manage all program operations.

Interactions with Other Mechanisms

The Execution mechanism, in serving as the "nerve center" of the program, interacts with all other mechanisms to see to the adequate operation of the program. Not only must it be serviced by all of the other mechanisms in defining, developing, testing and modifying the program operations, it must in turn service all other mechanisms in coordinating and controlling program operations.

The Adaptation Mechanism

Mission

The goal of the Adaptation mechanism is to redesign program parts and program operations on the basis of evaluative data so that program goals can be more effectively and efficiently accomplished.

The function of adaptation is not new in concept to teacher education programs but it is new as a clearly defined, operationally responsible mechanism in support of such a program. The ComField model has not left to chance or informal options changes needed in the program to improve its effectiveness. The Adaptation mechanism was designed specifically to monitor for ineffective aspects of the program and to design or redesign the parts of the program and their operations so as to reduce or remove weaknesses when identified.

Mechanism

In order to make adaptations to the program, a mechanism must be established having the following characteristics:

STRUCTURE. The essential parts of the Adaptation mechanism include:

1. Personnel representing all instructional, supporting, management and changeover components of the program;
2. Evaluation data reporting on the effectiveness/efficiency of all program operations and products;
3. Policy statements governing program operation;
4. Operational definitions of all instructional and supporting components within the program;
5. Documentation of the resources available to the program -- fiscal, physical and personal;
6. The linkages between all parts of the program, and to other institutions and agencies affiliated with the program; and
7. The physical and material facilities needed in support of adaptation functions.

COMPOSITION. Because the program is so complexly composed and involves so many different institutions and agencies the composition of the Adaptation mechanism becomes extremely crucial. Individuals constituting the membership of this mechanism must be selected on the basis of a comprehensive knowledge of all aspects of the program and a

sufficient objectivity that they are able to counter personal biases regarding program components in light of evaluative evidence of effectiveness or benefits. It is also deemed critical that members of this mechanism carry other areas of responsibility in the program, for example, a supervising teacher could be appointed to the Adaptation mechanism on a part time basis while continuing as a supervising teacher.

The work of the Adaptation mechanism will confront many problems of a systems nature, that is, designing the many parts of the program in such a way as to achieve maximum effectiveness for each part as well as the program as a whole. This requires representation of persons who are experienced in systems design. Competence of this kind can be brought to the mechanism by staff within the program or by consultation from systems specialists employed specifically for that purpose.

In addition to the above, it is recommended that the membership of the Adaptation mechanism have access to staff members or consultants and a temporary or variable schedule. Since it is not possible to anticipate all the problems in a program before they occur it is not desirable to have staff representation on the mechanism from all sub-parts of the program. At the same time it would not be wise planning to think that a central staff alone would be able to accommodate all adaptation needs. Therefore, it would be much wiser for the mechanism to have access to special staff during particular time periods to assist in the planning and design of special program components.

The following suggests the minimal representation for selecting the adaptation membership:

Permanent membership (either part or full time)

- College
 - Elementary Education Department
 - Administration
 - Elementary Education majors
- School
 - Supervising Teachers
 - Administration
- Systems Designer

Temporary Membership (short term variable schedules)

- College and School (drawn from the Coalition as needed to provide specialist assistance)
- Teaching Research (drawn from the Coalition as needed to provide specialist assistance)

Operations

The Adaptation mechanism is responsible for the continuous modification of plans, coordinations and operations essential to the effective and efficient operation of the program. The mechanism derives from the assumption that it is not possible for the parts of a program as complex as the one proposed to regulate their own deficiencies in the best interest of total program operation without having some overall regulatory and coordinating mechanism. At the same time, it is recognized that for such a mechanism to have an autonomous staff and to be given complete control over the adaptation process in any and all situations would be highly inefficient and politically disastrous. As a consequence the mechanism is perceived as possessing a core cadre who are highly trained and competent in the business of deciding upon and carrying out effective changes in existing programs. However, in most, if not all change efforts it draws upon qualified personnel responsible for the operation of the component of the program to be changed or it leaves the adaptation process entirely up to those who are responsible for the operation of the component once the need for change has been pointed out. To be successful the Adaptation mechanism must engage in vital negotiation with other mechanisms to determine degree of involvement. In this regard it is likely that certain fairly stable criteria will emerge which will guide mechanism involvement, but also highly likely that certain other criteria will always be in flux and dependent upon the total set of circumstances evident at any one particular time.

The core cadre of members on the Adaptation mechanism should be selected by the Execution mechanism, with their performance subject to periodic review by a special committee elected by the membership of the several mechanisms. Major tasks that must be accomplished include:

1. Select and orient membership of the Adaptation mechanism to the mission of the mechanism and the program in general;
2. Define the responsibilities of the membership of the mechanism;
3. Define criteria by which adaptation needs are to be determined and acted upon;
4. Identify types of evaluative data needed, and their sources, in order to carry out the adaptation function;
5. Obtain evaluative data;
6. Analyze evaluative data to determine needed changes;
7. Establish adaptation priorities and schedules, giving attention to the program's several parts and their inter- and intra-institutional operations;

8. Determine temporary staffing needs required by each adaptation effort;
9. Design new and/or modified program specifications;
10. Transmit recommendations for change to appropriate mechanisms; and
11. Establish a continuing adaptation review and revision schedule that is adaptive to the developmental needs of the program.

Interaction with Other Mechanisms

The Adaptation mechanism obtains information from all other mechanisms as to anticipated or actual problems. It also obtains operational plans from all mechanisms. In addition it requires the following:

1. From the Data Generation Mechanism - specified effectiveness and efficiency data;
2. From the Information Management Mechanism - advice regarding the means for regulating essential information flows and the servicing of established information specifications; and
3. From the Program Execution Mechanism - advice regarding selection of temporary members and sensitization concerning the political climate for change within the various parts of the program.

The Adaptation mechanism provides all other mechanisms -- as required -- recommendations for change, assistance in establishing new plans and procedures, and/or directives in adopting new practices.

CHAPTER 12

THE CHANGEOVER MECHANISMS

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Whenever major change in program operation is attempted complications arise: some people are ready to change and others aren't; some feel left out of the change process when they in fact have not been left out, and others get left out; movement on the various fronts demanding of change is often uneven; the integration of new and old gets out of balance or is mistimed; etc., etc. Moreover, the complications accompanying change seem to increase as the size or complexity of the unit undergoing change increases. Change in a large department, for example, tends to be considerably more complex than change in a smaller one. Change that affects a total school or college is usually more complex than change within a single department. Change involving a coalition of institutions and agencies, or the educational pattern of an entire state, involves a level of complexity that is staggering. Yet this is the level of complexity with which the program proposed at OCE must deal.

The fact that multiple institutions and agencies can plan together for change has been demonstrated in the feasibility study, and provides a sound base for proceeding with implementation. Whether the change that has been planned can be effected in operational programs across such numerous and diverse agencies, however, is still an open question.

In anticipation of these kinds of complications, and in anticipation of the responsibility for disseminating that which has been developed at a regional and national level, two special "changeover" mechanisms have been designed into the program. These are the Accommodation and Dissemination mechanisms. The Accommodation mechanism is specific to the OCE Coalition, and has the responsibility of carrying out the planning, coordinating and bridge building necessary to insure that that which is being developed within the coalition can be integrated with the on-going programs for which the various members of the Coalition are responsible. In general terms the mechanism calls for time to be given to members of each of the constituencies within the Coalition for the identification of the sources of difficulty anticipated or encountered in the changeover process, planning ways in which such difficulties can either be circumvented or overcome, and insuring that an appropriate balance be kept between the phasing in of the new program and the administration and phasing out of the existing program.

The Dissemination mechanism serves the needs of both the OCE Coalition and the larger educational community in that it carries responsibility for informing all those within the OCE Coalition, across the

state and throughout the nation about the program.¹ Two factors precipitated the decision to include such a mechanism in the program: a) experience in the Coalition to date suggests that the primary prerequisite to effective coalition functioning is timely and appropriate information about the program, and b) in order for the program to have an impact regionally and nationally accurate and easily consummable information about it must be available. Because of the magnitude of these tasks, and their criticalness, the decision was reached to design a special mechanism to carry out the dissemination function.

The label "changeover mechanisms" is an accurate description of the Accommodation and Dissemination mechanisms in that they are scheduled to function only during the time that the changeover process is occurring. Once the program has been implemented the Accommodation mechanism will no longer have a function to perform, and once the federally supported project is terminated the heavy regional and national dissemination requirements will diminish. At that time the dissemination function will be incorporated within the regular information and public relations activities of the college.

¹By contrast the Information Management mechanism carries the responsibility for providing the information needed within the coalition to make the program operational.

The Accommodation Mechanism

Mission

To insure that a schism does not occur between those responsible for developing the new program and those responsible for maintaining the operation of the existing program during the transition period, and to insure that the quality of the existing program is not threatened by inadequate resource allocation or by phasing in elements of the new program which are overly disruptive to the existing program. Such assurances must be made within all constituencies of the OCE Coalition, that is, within the OCE elementary teacher education program, the secondary education program, the college as a whole, and each of the school districts participating in the Coalition. Responsibility for accommodating the emerging and existing programs within the State System of Higher Education, other institutions in the state that prepare elementary teachers, the State Department of Education and the education profession as a whole rests with the Adaptation mechanism within the program management function.

Tasks

1. Monitor that which is being proposed and/or developed for the new program, and the resources required thereby.
2. Reflect that which is being proposed and/or developed against those responsible for maintaining the on-going program to determine its implications for program maintenance.
3. Work out viable compromises between the developers of the new program and the operators of the on-going program whenever compromise is needed.

Rationale

For a period of five to seven years essentially two programs will be in operation at OCE, the emerging program and the program currently in operation.¹ This is the case at both the college and public school

¹The statement that two programs will be operated is in a sense a misnomer in that for the first two years of the implementation effort the existing program will be in full operation and during the next three to five years students will be divided between the emerging and the existing programs. Operationally this means that starting in Year 3 of the implementation effort students will begin phasing into the emerging program and by Year 6 or 7 all students will be functioning within the new framework. Between Years 3 and 6 two "partial programs" will be operating.

level. Within such an arrangement a variety of disruptive factors can occur; e.g., feelings of jealousy, abuse, advantage taking or second class citizenship, staff overload, and students in the teacher education program and pupils in the public school program getting caught in currents of feelings of program ineffectualness. Since such consequences need to be avoided as much as possible, and since the attention that will be required on the part of each constituency within the coalition to do so will be considerable, a special mechanism has been designed into the program to attend to such matters. Operationally the mechanism will work closely with the Adaptation mechanism within the overall program management function.

Structure

It is proposed that a single structure carry out the functions of the mechanism. The structure will involve working groups within each of the constituencies within the Coalition and a person responsible for seeing that these groups function as needed.

Composition

The accommodation structure within each constituent group will involve those in the group that are primarily responsible for the operation of the existing program and members of the group that are primarily responsible for the implementation of the new program, i.e., that are part or full time on new program activities.

Implementation

Since the need to coordinate the emerging and continuing programs will exist from the beginning the accommodation structures will be established within each constituency as soon as the implementation effort begins. It is anticipated that the accommodation structures will operate only throughout the changeover process. As soon as the proposed program is fully operational the structures will cease to exist.

Linkages with Other Operational Mechanisms

THAT WHICH IS NEEDED FROM OTHER SYSTEMS: plans and progress reports from all operating units within the project as these pertain to the operation of the on-going program for which Coalition members are responsible.

THAT WHICH FLOWS TO OTHER SYSTEMS: recommendations and/or confirmations relative to that which is being planned or that which has been accomplished.

The Dissemination Mechanism

Mission

To provide information, either upon request or by initiation, about the program.

Tasks

1. Inform the membership of all Coalition constituencies of that which is being planned and that which has been developed.
2. Inform students about the program as they enter it and as they move from phase to phase within it.
3. Inform visitors to the program, and assume responsibility for their care while they are visiting.
4. Inform the school boards and the citizenry of the communities participating in the coalition program.
5. Inform members of the State Board of Education, the State Board of Higher Education, and the State Legislature of the program.
6. Inform citizens of the state about the program.
7. Assume responsibility for coordinating and carrying out all regional and national dissemination efforts associated with the program.¹

Rationale

Because of the nature of the proposed program, its potential impact upon teacher education in the state, and the responsibilities for regional and national dissemination if the program is supported by federal funds, the need to inform a broad range of people of the program and to keep them informed as it progresses is critical. To do so will represent a huge undertaking. Approximately 135 man days of project staff time

¹ Dissemination activities are not to be confused with activities designed to aid institutions in adapting the proposed program to fit their respective needs. The procedures to be followed in facilitating program implementation on a state-wide basis are outlined in Part VII of the report. Thoughts about facilitating implementation on a regional and national scale are outlined in Part VIII of the report.

were devoted to dissemination efforts during the feasibility project - excluding time in the preparation of materials to be used in preparation and the time of those with whom project staff met. This represents an equivalent of a full time staff member for six months. Considering that the demands upon the dissemination function during the feasibility study were moderate compared to what they will be during implementation, the establishment of a mechanism for the expressed purpose of handling dissemination responsibilities seems essential.

Structure

It is proposed that a single structure carry out the work of the mechanism. The structure will be located at OCE and will coordinate closely with the existing Department of Information at OCE.

Composition

A dissemination specialist that is both knowledgeable of education and teacher education will serve as coordinator of mechanism activities. He will have a supporting staff of college and school based personnel who are familiar with the project, a professional writer, technical production assistants, etc. As such, staff for the mechanism may be drawn from institutions within the OCE Coalition or from without it.

Implementation

Since the need to inform others of the program will exist from the moment implementation efforts begin, and continue throughout the life of the project, the Dissemination mechanism will be activated and maintained from the inception of the project. It is anticipated that the demand placed upon the mechanism will be heavy at all stages of the implementation effort, but that once the program is in operation the continuing responsibilities for dissemination will be able to be carried by the existing department of information within the college.

Linkages to Other Operational Mechanisms

THAT WHICH IS NEEDED FROM OTHER SYSTEMS:

1. Information as to all orientation-dissemination needs, including specific time lines within which they must be met;
2. Information as to the materials resources available in support of the dissemination function;

3. Information as to the effectiveness of the dissemination efforts;
4. A record of all dissemination activities carried out, the persons involved in them, etc.;
5. The facilities, equipment and supplies that are needed in support of the dissemination function.

THAT WHICH FLOWS TO OTHER SYSTEMS: dissemination services as requested.

PART V

**BRINGING CURRICULUM AND OPERATIONAL MECHANISMS TOGETHER:
A FIVE YEAR PLAN FOR IMPLEMENTING THE
PROPOSED TEACHER EDUCATION PROGRAM AT OCE**

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BRINGING CURRICULUM AND OPERATIONAL MECHANISMS TOGETHER:
A FIVE YEAR PLAN FOR IMPLEMENTING THE
PROPOSED TEACHER EDUCATION PROGRAM AT OCE

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The five year plan for program implementation is the vehicle that brings the structure and content of the program (described in Part III) and the mechanisms that permit the program to operate (described in Part IV) into a functional relationship. In developing the plan all of the specifications around curriculum, instructional procedures, inter-institutional relationships, the number and kind of mechanisms needed to support program operation -- in fact, all of the thinking that had ever been done about the proposed program -- had to be synthesized and cross-referenced for integrity, comprehensiveness, feasibility, etc. In addition it all had to be referenced against a development-implementation time line. Care had to be taken to insure that the development schedule for each element of the program was properly synchronized or orchestrated with the development schedules for all other elements of the program, and the program as a whole. Without such orchestration the implementation of a functional program of the kind proposed would be haphazard at best. Implementation within a fixed time schedule would be impossible.

For purposes of the feasibility study the plan of implementation was scheduled initially around a five year time frame. As the schedule was developed, however, and submitted to a detailed analysis of its feasibility (see Chapter 2) it was concluded that while the bulk of the program could be implemented within a five year period it would require six or perhaps even seven years -- under optimal funding conditions -- to get it fully implemented. As a consequence the implementation schedule extends through six years, with "contingency factors" scheduled through seven. Cost estimates associated with implementation, however, (see Part VI) are reported only for years one through five.

The Objectives of the Five Year Plan

Three general objectives guided the development of the five year implementation plan:

- 1) a formal and detailed description of the plan was to emerge;

- 2) the formal plan had to reflect all of the elements and/or components of the proposed program; and
- 3) the plan was to show an integration of developmental-implementation tasks under the constraints of an explicit time line. Important to this integration was an accommodation between existing and proposed operational structures across the institutions and agencies that comprise the OCE Coalition.

Specifications that Guided Planning for Implementation

Program Change and Development Must Be Coordinated with Existing Administrative Structures

Decisions about the development and implementation of the proposed program must be made by existing administrative personnel within the Coalition institutions. Without their involvement in such decisions, and without careful attention to the relationship between the decision making structure that emerges within the program and those which exist in participating institutions, it is unlikely that the program will ever become operational. This is especially so in view of the large number of institutions and agencies involved in the proposed program. In planning for the program, however, the issue has been squarely faced, and efforts have been made to secure the guidance and approval of administrative staff from all constituencies within the Coalition on all aspects of program development.

Program Development Must Be Monitored Carefully for Its Impact Upon Existing Programs

As important as it is to coordinate program development through existing administrative structures it is equally important to maintain constant vigil on the effects of the new program on the instructional programs ongoing in the college and the Coalition schools. This means that within the five year plan provision must be made for the continuous monitoring of the proposed program by those responsible for the execution of ongoing programs (until the changeover process has been completed) and opportunities provided to modify that which is being proposed in light of its impact on the ongoing programs. The Accommodation mechanism (see Chapter 12) has been designed explicitly for this purpose.

Program Development Must Provide For the Implementation of All Program Specifications

In designing the five year plan, special attention has to be given to the major characteristics of the proposed program, as well as its structure, content and operation. As such the plan has to accommodate the requirement that the program be competency based, field centered, personalized and systematically designed or data dependent. Moreover, it must provide for the translation of these characteristics into

program operation within the General Studies, the Clinical Studies and the Intern phases of program operation. Finally, the plan must provide for the translation of foundation, self confrontation, professional orientation and professional integration experiences within the constraints placed by program characteristics and structure.

Several assumptions underlie the specifications that guided program planning:

- 1) persons who are targets for change in the proposed program must be involved in planning and designing the changes to be made;
- 2) all task groups working toward program implementation will be able to work closely with all other task groups;
- 3) the institutions and agencies involved in the Coalition can in fact cooperate; and
- 4) weaknesses that exist in the plan can be changed.

An Overview of the Five Year Plan

The Proposed Organizational Structure

A. The ComField Coalition. The ComField Coalition will be formed by the joining of forces from at least six sectors of the professional community. These include: (1) OCE personnel; (2) public school personnel; (3) state department personnel; (4) Teaching Research personnel; (5) college students; and (6) patrons of the colleges or schools who may be representative of business, or professional groups. The rationale for and membership of the Coalition is discussed in the Preface and Chapter 1.

B. The ComField Policy Board. The existing administrative units within the institutions and agencies that constitute the OCE Coalition will appoint representatives to a Program Policy Board. The Board will have as its main function the monitoring of program development and determination of policy for program operation. The program director will act as chairman of the Board, and will be responsible for carrying out the policy of the Board. The structure and function of the policy setting mechanism within the program is discussed in detail in Chapter 11.

C. The Program Director and Associate Director. Both positions will be filled by persons from within the institutions and agencies that constitute the Coalition who are familiar with the proposed program and who are acceptable to all constituencies within the Coalition.

The program director will have responsibility for overall program management and interagency relationships, including effectively interfacing the program with the efforts of the state-wide consortium (see Part VII) and the national models program (see Preface). The associate director will have primary responsibility for the execution of instruction within the program and all matters that pertain directly to it. As such he will carry heavy responsibility for the management of the internal operations of the program.

D. The Coordinating Council. The management council is presided over by the associate director and meets to consider all matters of importance regarding ComField objectives and program operations. The council is made up of the program director, the associate director, and six assistant directors who are in charge of facilitating task forces (see below). As such the Council provides for close linkage between all components within the proposed program and should provide the necessary work force to maintain integration between and among all task forces working on the implementation of the program. Members of the Coordinating Council will be responsible to the program director. The structure and function of the Coordinating Council is discussed later in the present chapter and in Chapter 11.

E. The Task Forces. Six task forces will carry primary responsibility for program development and implementation. These will have the following foci: Student Affairs¹; Instructional Design and Development; Instructional Objectives, Operations, Execution and Adaptation; Information Management; Data Generation; General Support; and Program Changeover. Operationally all of the program mechanisms described in Part IV of the report are accounted for within the six task force groups.

The organizational structure proposed for the implementation effort is shown schematically in Figure 19.

The Proposed Plan of Operation

When the six task forces and the central coordination-implementation teams become involved in program activities a set of generic processes is required to describe the interactions between and among them. In the paragraphs which follow the processes which characterize the operation of each of the working groups are described generally.

¹ An area unattended to in both the model development and feasibility study efforts. This was an oversight and during implementation will need to be attended to carefully.

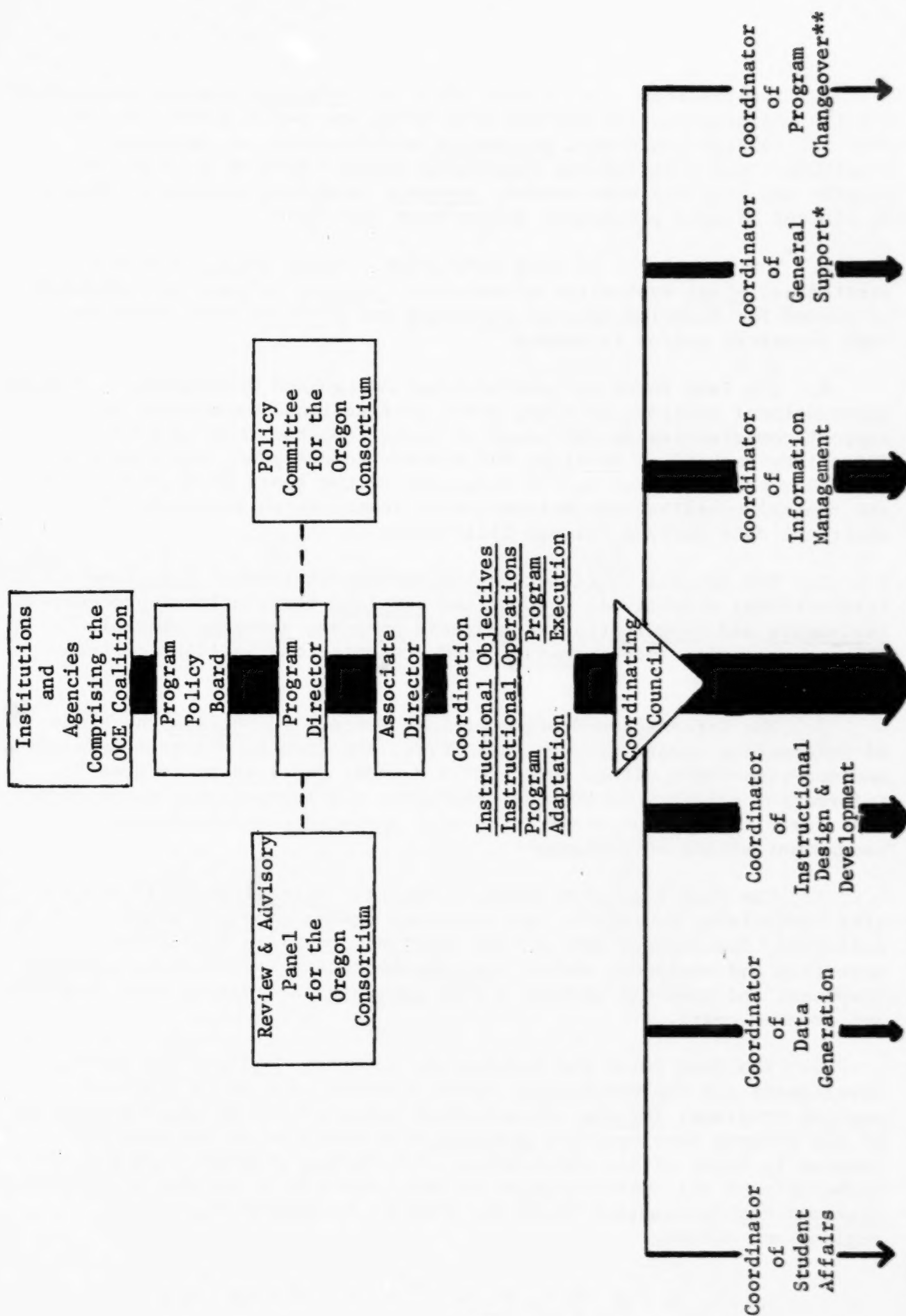


Figure 19. The organizational structure proposed to carry the implementation effort.

* The Task Force for General Support includes the Staff Selection and Development mechanism, the Cost Accounting mechanism and the Supply mechanism.

** The Task Force on Program Changeover includes the Accommodation & the Dissemination Mechanisms

A. The Task Force on Student Affairs. Monitors program development for its implications for student well being and participation in the over-all college community; recommends modifications in existing structures and/or operations supporting student affairs in light of program implications when needed; assesses long term effects of change in student affairs procedures and program operation.

B. The Task Force on Data Generation. Helps design research strategies; plans evaluation procedures; collects information requested or needed for decision making; organizes and provides that which has been requested and/or is needed.

C. The Task Force on Instructional Design and Development. Designs instructional systems, to bring about instructional management and support competencies on the basis of input from the Instructional Objectives mechanism; develops the systems so designed; modifies that which has been designed and/or developed on the basis of feedback from the central coordination-implementation teams, or on the basis of empirical data derived through field tests.

D. The Central Coordination-Implementation Teams. Specifies instructional objectives; designs and develops instructional procedures; implements and coordinates the over-all program; assesses over-all program operation and recommends needed adaptations in light of such assessments.

E. The Information Management Task Force. Identifies the kinds of information needed by each Task Force, the form in which it is needed and the time-frame within which it is needed; develops procedures for information collection, storage, retrieval and transmission which permit task force information needs to be met; operates the information management system so designed.

F. The Task Force for General Support. Determines staff, facilities, materials, equipment, and budgetary needs; provides staff selection, development and welfare services; provides facilities, materials and equipment needs; provides budgetary information; assesses component and over-all program costs; provides information upon component and program costs.

G. The Task Force for Program Changeover. Monitors the design, development and implementation of the proposed program in light of ongoing programs; informs all personnel responsible for ongoing programs of new program developments; proposes modifications in the proposed program in light of its implications for ongoing programs; informs the membership of all constituencies in the Coalition of program developments; disseminates information about the program throughout the state, region, and nation.

In the course of implementation an extremely complex set of interactions must occur across Task Forces. First order interactions occur around the central coordination-implementation function. The major purpose of the program is carried in this function and the primary aim of all other functions is its support. In receiving such support the central function both influences and is influenced by other functions. The nature of first order interactions is illustrated schematically in Figure 20.

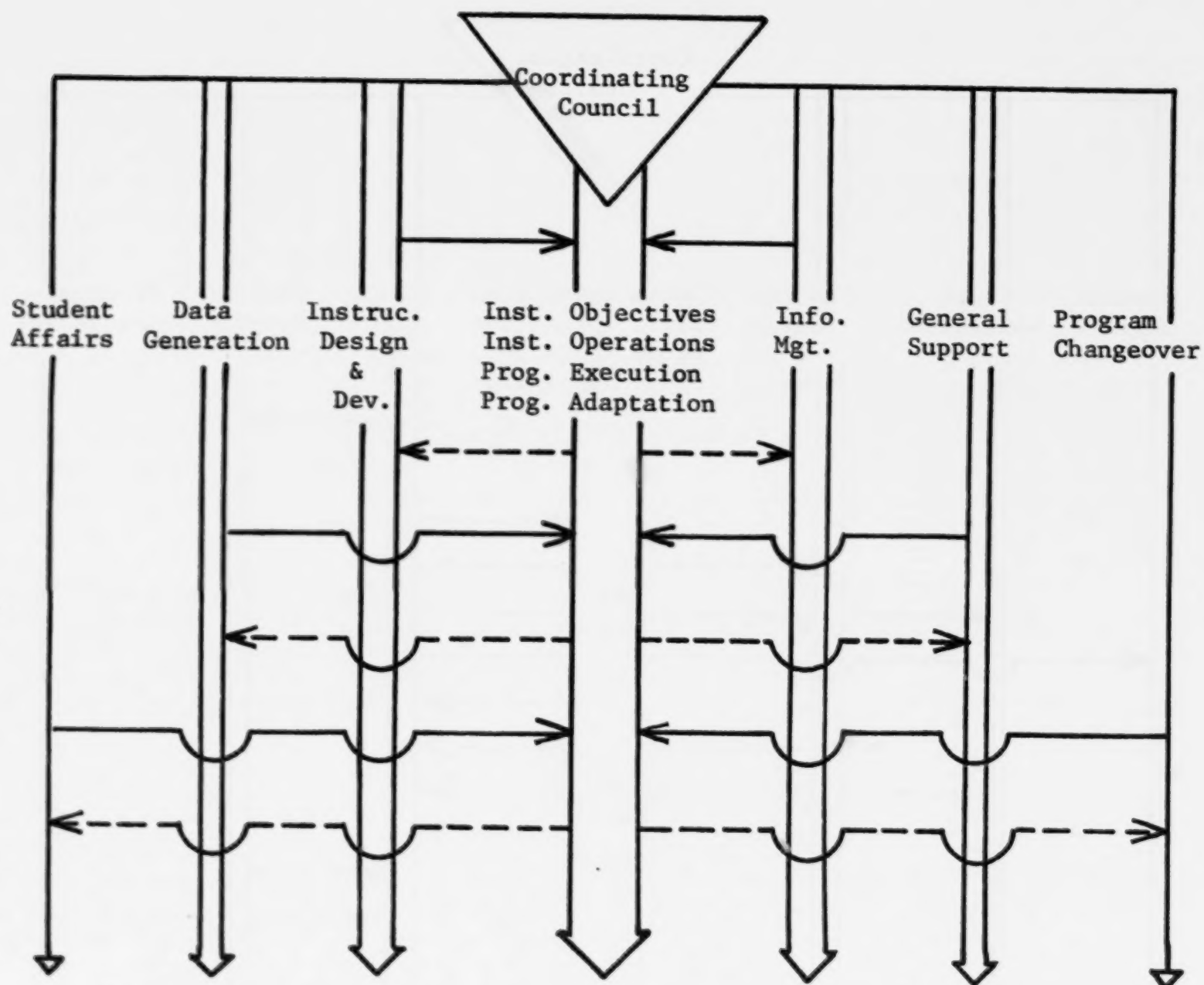


Figure 20. A schematic illustration of first order interactions between implementation functions.

—→ = Support For
 - - - - -→ = Influence Upon

In addition to first order interactions there are essentially unending second order interactions. To operate, the Instructional Design and Development function must have specially trained personnel, equipment, supplies, information from the accommodation mechanism and a wide range of data. So too does the Information Management function and the Data Generation function. Simultaneously each is supporting and making demands upon the other. The nature of such interaction is illustrated schematically in Figure 21. The specific interactions to be carried out by each operational mechanism in support of implementation are specified in Part IV.

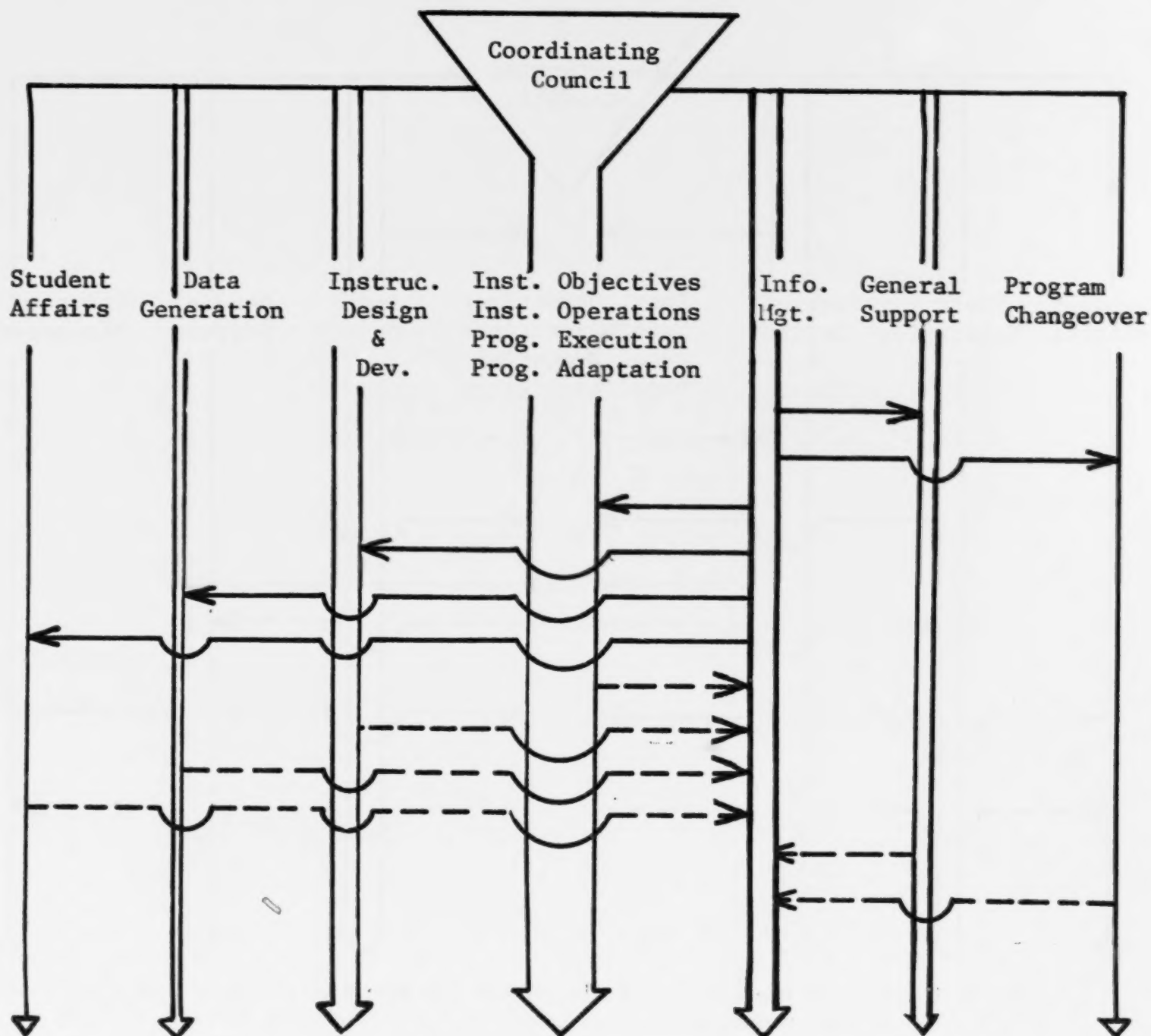


Figure 21. A schematic illustration of second order interactions.

—————> = Provision of Information - - - - -> = Receipt of Information

Throughout the implementation effort the Coordinating Council will carry responsibility for the broad operational decisions that must be made in support of program objectives. Task Force coordinators are responsible for their implementation.

The Proposed Schedule of Events

A detailed schedule of events, by operational mechanism, appears as Appendix P. The events identified in that appendix have been translated into a "working schedule" which shows the interaction of events across mechanisms through time and constitutes the actual guide to implementation. Because of its complexity the working schedule has not been included in the final report, but it is available upon request. A summary of the working schedule, however, is provided in the pages which follow.

January 1 - June 30, 1970

The major emphasis during this period of time will be on firming the overall Coalition management relationships. Final negotiations will be conducted between all constituencies within the Coalition in order to establish who will be represented in what ways at the level of policy and operation.

A second emphasis will be the identification of key project personnel. It is anticipated that by July 1 the project director, associate director, and task force coordinators will have been identified.¹ During this period the Staff Selection and Development mechanism and the Instructional Objectives mechanism will be formally established.

July 1 - August 15, 1970

The selection, orientation and training of the personnel who will comprise the various teams designed for each Task Force constitutes the major focus for the period. It is planned that this will be carried out in two phases. The first phase involves planning the orientation and training programs and the selection of staff; the second involves the training of all personnel to carry out the functions for which they will be responsible.² The Staff Selection and Development mechanism will carry major responsibility for these activities.

¹ The reader is referred to Part VII for a description of developmental activities that will be taking place concurrently on a state-wide basis.

² This includes all eight Instructional Design and Development teams even though four of the teams will not begin to function until 1971-72 (see Chapter 9).

A second focus of the period is the specification of program objectives.

August 15 - Sept. 15, 1970

Activities during this time period center around the completion of personnel training and the completion of a "first approximation" to a program objectives statement, including the general classes of indicators acceptable as evidence of the realization of those objectives. At the close of this period half of the Instructional Design and Development Teams will drop out of new program activities for a year. During this time they will carry out ongoing program activities and all functions supporting the central coordination-implementation function will be operational to the point of being able to support the initial work of the Instructional Design and Development teams.

Sept. 15, 1970 - June 30, 1971

The Instructional Design and Development Teams begin the process of instructional systems development. Each team will be assigned responsibility for developing specified systems (two to four for each team). The supporting task forces continue their own development while they provide others (especially the Design and Development teams and the Central Coordination-Implementation teams) with that which they need to operate. Expected instructional products include recommended self confrontation and professional orientation experiences for the General Studies phase of the program and roughly one-third of the foundation experiences ultimately needed in support of general and professional studies. (Set A). Initial planning of Clinical and Intern experiences designed to complement and extend General Studies experiences will have been completed. Support capabilities needed in conjunction with foundations, self confrontation and professional orientation experiences should be completed and initial planning of support capabilities for professional integration experiences should be underway. Students should be selected for preliminary try-out activities with instructional materials. The coordination of the proposed and the existing teacher education programs should be an accomplished fact. The year's activities will be evaluated summatively to provide the Instructional Design and Development teams who come on line during the next year some operational short-cuts and solutions to problems encountered during the year's activities.

July 1, 1971 - June 30, 1972

The other four Design and Development teams begin their planning activities during this year. Their addition will initiate work on the development of all remaining instructional systems. (Set B). Additional activities include preliminary field trials on all instructional materials and/or learning experiences developed during the previous year, their refinement on the basis of the field trial data and preparation for field trials during the coming year; (formal field trials

are carried out by staff other than those involved in the development of the materials) and completion of the professional integration learning experiences for the instructional systems being field tested for foundations experiences. Approximately 30 students will be involved in each preliminary field trial and 60 in each formal field trial. As such approximately 90 students will be involved in preliminary field trial operations.

The year's activities should result in approximately 1/3 to 1/2 of the learning experiences needed to support the General Studies phase of the program being ready for formal field testing, including complementary support capabilities. In addition approximately 1/3 to 1/2 of the foundations experiences needed in support of professional development (encountered primarily in the Clinical Studies phase of the program) will be ready for formal testing.

July 1, 1972 - June 30, 1973

Formal field trials will be carried out on all materials that underwent preliminary field testing the previous year; preliminary field trials will be carried out on all materials initially developed the previous year; and all remaining instructional systems components will be taken through an initial level of development. Approximately 180 students will be involved in formal field trial activities during the year and 120 in preliminary field trials. The support capabilities for all instructional activities at the General and Clinical Studies levels should be fully operational.

July 1, 1973 - June 30, 1974

Refined development of all learning experiences formally field tested the previous year will be undertaken; formal field tests of the materials informally tested the previous year will be carried out; and informal field tests will be run on all materials taken through initial development. Materials undergoing refined development will have been incorporated into the program as fully operational. This means that all students in the General Studies phase of the program will be operating within fully tested instructional systems or in formal field test situations. Approximately 180 students will be involved in formal field trials of desired experiences, and 180 in preliminary field trials at the Intern level. All support capabilities should be tested for full operation under field trial conditions - all field based clinical supervisors trained.

July 1, 1974 - June 30, 1975

Refined development of all learning experiences formally field tested the previous year; formal field tests of all learning experiences that underwent preliminary testing the previous year. By 1974 the General Studies phase of the program will be fully operational as will at least 3/4 of the Clinical Studies program. Some clinical

experiences will still be undergoing formal field testing and approximately 3/4 of the learning experiences designed for the Intern phase of the program will be under formal field test. One fourth will still be undergoing preliminary field trials. Essentially all of the students majoring in elementary education will be involved in the program at this time - either as students in a fully operational program or as participants in field trial operations. Supporting functions should be fully operational and long term cost/effectiveness and cost/benefits data should begin to emerge. For a detailed breakdown of the schedule for instructional systems development see Table 4 in Chapter 9. A rough approximation to the integration of students into the new program appears as Table 5.

July 1, 1975 - 1976
(the first year beyond the five year plan)

Complete all formal field testing and carry out refined development on the experiences formally field tested the previous year. All support capabilities fully operational. All students engaged in the model based program. Cost/effectiveness and cost/benefits data becoming stable.

July 1, 1976 - 1977
(the second year beyond the five year plan)

Complete refined development of all instructional experiences. All students engaged in a fully operational program. Program adaptation begun on the basis of stable cost/effectiveness and cost/benefits data.

Table 5. An Approximate Schedule of Student Integration Within the Program.

Sept. 1970-71	Sept. 1971-72	Sept. 1972-73	Sept. 1973-74	Sept. 1974-75	Sept. 1975-76
75				Preliminary and Operational Field Trials	Operational Field Trials
25	Preliminary Field Trials	Preliminary and Operational Field Trials	Refined Development and Operation	Refined Development and Operation	Refined Development and Operation

PART VI

ESTIMATED COST OF CARRYING OUT
THE PROPOSED FIVE YEAR PLAN

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ESTIMATED COST OF CARRYING OUT
THE PROPOSED FIVE YEAR PLAN

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Cresap, McCormick & Paget Inc.

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Teaching Research

Background, Approach and Assumptions

Background

In May, 1969 Oregon College of Education selected the management consulting firm of Cresap, McCormick and Paget Inc. to assist in estimating the cost of and preparing a financial plan for the development, implementation, and operation of a Model Based Teacher Education Program (ComField) at the College over a five year period of anticipated government support. During the next seven months, representatives of the consulting firm met with officials and staff from OCE and staff from the Teaching Research Division, Oregon State System of Higher Education, to prepare the estimate in a way that would serve as a financial plan for the proposed program. A stipulation of the agreement was that the cost estimate be supported by sufficient rationale and explanation that it would aid other institutions which, in the future, would be estimating their own costs for implementing such a program.

Specifications for developing and managing the program were prepared by task forces made up of staff from OCE, TR, and the public schools. Resources required for implementing individual components of the program over the five year period were also provided by these groups and served as the basis for the cost estimate.

The consultants' role in estimating these costs and developing the financial plan was basically threefold: 1) to act as an independent objective party with experience in financial analysis, 2) to provide guidance and assistance for individual task force members in the preparation of their component estimates, and 3) to develop a format and perform the analysis and computations necessary for the preparation of the five year projection.

Throughout this process it was clearly understood that the final decisions on resource requirements would be made by responsible individuals within OCE, with tentative approval given by the OCE Dean of Faculty and the Chairman of the Education and Psychology Department. Final approval by the College Administration depends on the response from the United States Office of Education. Each financial estimate was reviewed in detail by the Project Director and the staff member responsible for derivation of cost estimates.

Approach

Five specific and overlapping tasks were performed by the consultants in preparing these estimates.

First, the consultants were oriented to the proposed program by reviewing literature, attending staff meetings and holding individual discussions with project personnel. These activities grew in intensity over seven months, and in the latter months the consultants were called upon to assist in refining the organizational structure being proposed.

Second, meetings were held with task force representatives to identify areas to be costed, to develop a format for presentation, and to estimate costs. In total, twelve component areas were identified covering all phases of development and implementation. These are shown below with reference to chapters in the report that describe the components in detail.

<u>Component Area</u>	<u>Chapter in Which Component is Described</u>
Instructional Design and Development	9
Instructional Operations	9
Program Management:	
Policy Creation and Adoption	11
Policy and Program Execution	11
Program Coordination:	
Instructional Objectives	9
Adaptation	11
Accommodation	12
Dissemination	12
General Support:	
Data Generation	10
Information Management	10
Staff Selection and Development	10
Cost Accounting	10

The estimates of the resources needed to activate each of the operational mechanisms required in the program appears as Appendix K. The calendar of events involved in the activation of each component appears as Appendix P. In combination the data provided in these two appendices provided the basis for the derivation of cost estimates.

Third, three preliminary cost estimates were prepared for review by Oregon College of Education and Teaching Research personnel, the second of which was submitted to the United States Office of Education in September, 1969 as a formal preliminary estimate. Since that time, however, the program received considerable refinement and the cost estimate

in the present report reflects the refinements made.

Fourth, present operating costs of the current elementary education program at Oregon College of Education were identified, along with projected increases in student enrollment over the next five years. These data were used to forecast the elementary education operating budget for the fiscal year 1976, the year scheduled for the full implementation of the proposed program. The OCE Business Office, the Dean of Faculty, and the Chairman of the Education and Psychology Department were very helpful in providing this information. This budget forecast served as a guideline or target of maximum operating cost once the program is implemented. A discussion of projected operating costs is found in Chapter 2.

Fifth, the consultants prepared the summary and component cost estimates, and supporting documents, that are presented in Appendix K and the pages which follow.

Assumptions

Preparation of the cost estimate required a number of assumptions relating to salary rates and length of participation for personnel in the program, cost of equipment to be used, the level of support materials needed for equipment and estimates of other costs, such as travel and communications. A discussion of these assumptions follows.

Personnel. Twenty-three classes of salaried personnel were identified as being required to develop and implement the program. The yearly salary rates for these positions are based upon the following:

- The most representative salary level for similar positions in the State of Oregon and Oregon College of Education salary structures, or upon estimates by the consultants and Teaching Research staff for positions not covered. (Adjustments of some rates were necessary in order to reflect, as accurately as possible, the level of experience required.)
- An additional 9.5 percent of base salary to cover benefits required by law to be paid by the host institution. This rate was supplied to the consultants by the OCE Business Office, and covers involuntary payroll assessments.
- A 3 percent annual increment to allow for cost-of-living increases (this increment does not account for exceptional performance.)

A summary of all proposed salary rates, rounded to the nearest one hundred dollars and including an index which is referenced with each component estimate, is shown in Table 6.

TABLE 6

SALARY RATES FOR COMFIELD PERSONNEL (1)
(Based on 12 Months)

Index (2)	Title	1971 Salary + 9.5% Benefits	Yearly Salary			
			1971	1972	1973	1974
(A)	OCE Educational Administrator	(\$25,100 + 2,400)	\$27,500	\$28,900	\$30,300	\$31,900
(B)	ComField Executive Director	(\$20,600 + 2,000)	22,600	23,700	24,900	26,200
(C)	ComField Associate or Assistant Director	(\$18,600 + 1,800)	20,400	21,400	22,500	23,600
(D)	Mechanics Coordinator	(\$17,800 + 1,700)	19,500	20,500	21,500	22,600
(E)	Teaching Research Staff	(\$17,800 + 1,700)	19,500	20,500	21,500	22,600
(F)	Coalition Administrator	(\$19,200)	19,200	20,200	21,100	22,200
(G)	Financial Systems Designer	(\$16,100 + 1,500)	17,600	18,500	19,400	20,400
(H)	Developer - Academic Community	(\$14,000 + 1,300)	15,300	16,100	16,900	17,700
(I)	OCE Academic Staff	(\$14,000 + 1,300)	15,300	16,100	16,900	17,700
						18,600

(1) Rounded to nearest \$100.

(2) Reference used in each component cost estimate.

Table 6 continued

<u>Index</u>	<u>Title</u>	<u>1971 Salary + 9.5% Benefits</u>	<u>1971</u>	<u>1972</u>	<u>Yearly Salary</u>		
					<u>1973</u>	<u>1974</u>	<u>1975</u>
(J)	Programmer - Analyst	(\$10,000 + 1,000)	\$11,000	\$11,600	\$12,100	\$12,700	\$13,400
(K)	Professional Writer	(\$9,400 + 900)	10,300	10,800	11,400	11,900	12,500
(L)	Programmer	(\$9,400 + 900)	10,300	10,800	11,400	11,900	12,500
(M)	Community Organizer	(\$9,000 + 1,000)	10,000 830/mo	10,500 870/mo	11,000 920/mo	11,600 970/mo	12,200 1020/mo
(N)	Professional Education Organizer	(\$9,000 + 1,000)	10,000 830/mo	10,500 870/mo	11,000 920/mo	11,600 970/mo	12,200 1020/mo
(O)	Coalition Supervising Teacher	(\$9,100)	9,100 175/wk	9,600 185/wk	10,000 190/wk	10,500 200/wk	11,100 210/wk
(P)	Production Assistant or Development Technician	(\$8,300 + 800)	9,100	9,600	10,000	10,500	11,100
(Q)	Administrative Assistant	(\$7,700 + 700)	8,400	8,800	9,300	9,700	10,200
(R)	Executive Secretary	(\$7,000 + 700)	7,700	8,100	8,500	8,900	9,400
(S)	Graduate Assistant or Student	(\$6,600 + 700)	7,300	7,700	8,000	8,500	8,900
(T)	Secretary	(\$5,500 + 500)	6,000	6,300	6,600	6,900	7,300

Table 6 continued

<u>Index</u>	<u>Title</u>	<u>1971 Salary + 9.5% Benefits</u>	<u>1971</u>	<u>1972</u>	<u>Yearly Salary</u>	
					<u>1973</u>	<u>1974</u>
						<u>1975</u>
(U)	Clerk	(\$4,500 + 500)	\$ 5,000	\$ 5,300	\$ 5,500	\$ 5,800
(V)	Management or Systems Consultants	N/A	225/day	235/day	250/day	260/day
(W)	Educational Consultants	N/A	100/day	105/day	110/day	115/day
						120/day
						275/day
						6,100

Estimates of participation for personnel are detailed in a footnote accompanying each component cost estimate. For personnel who will be newly hired for the project, or for existing OCE personnel working on the project, this participation is estimated in full time equivalent (FTE) units. For other professional personnel, such as consultants or those employed by the coalition schools, participation is estimated in days, weeks or months to cover either fees or release time (i.e., time away from normal duties which must be compensated by project funds.)

Equipment. Cost estimates for equipment such as typewriters, dictaphones and transcribers that are to be used in the development and implementation of the program are based upon telephone inquiries in the Portland area. Each estimate is rounded to the nearest fifty dollars. An itemization of equipment costs, with the total rounded to the nearest one hundred dollars, is presented in a footnote to each component cost estimate.

Materials. Support materials for equipment are estimated at two percent of personnel costs, rounded to the nearest five hundred dollars. However, occasional adjustments of this rule were necessary. Estimates for other materials, such as those relating to instruction, are based upon estimates particular to individual components, and are explained in a footnote accompanying the component cost estimate.

Other. Other costs, not classified under personnel, equipment or materials are also presented. These include travel costs, which are based upon State of Oregon allowable in-state per diem rates of fourteen and one-half dollars per day rounded to fifteen dollars per day, and allowable automobile transportation rates of ten cents per mile. Also included are communications costs which are estimated on a monthly basis, and other costs which are individually noted where applicable. A detailed breakdown of the above, where required, is shown in a footnote accompanying each component cost estimate.

Overhead

Oregon College of Education requires federal grant programs to reimburse the College for additional overhead costs incurred, based upon a historical study and estimate of these by the State of Oregon. For the College, this assessment is 23.46 percent of all direct costs excluding equipment, and is shown in Tables 7 and 8.

Cost Estimate

In the pages which follow summary tables of cost estimates for developing and implementing the proposed ComField program over the five year period July 1, 1970 to June 30, 1975, are presented.

The tables included are:

<u>Title</u>	<u>Table Number</u>
Summary of Five Year Development and Implementation Costs	7
Annual Costs for Development and Implementation by Program Component	8
Summary of Total Personnel Requirements	9
Summary of FTE Personnel Requirements	10
Summary of Other Personnel Requirements	11

Tables of cost by program mechanism appear as Appendix K. For each component estimated costs are categorized by personnel, equipment, material, and other. Each table contains footnotes explaining the basis for the estimate.

TABLE 7
SUMMARY OF FIVE YEAR DEVELOPMENT AND IMPLEMENTATION COSTS
July 1, 1970 to June 30, 1975

	<u>Personnel</u>	<u>Equipment</u>	<u>Materials</u>	<u>Other</u>	<u>Subtotal</u>	<u>Total</u>
INSTRUCTIONAL DESIGN AND DEVELOPMENT	\$4,421,400	\$183,300	\$1,100,600	\$547,900	\$6,253,200	\$ 6,253,200
INSTRUCTIONAL OPERATIONS	724,400	6,900	14,500	51,800	797,600	797,600
PROGRAM MANAGEMENT:						
Policy Creation and Adoption	159,800	1,000	2,700	15,500	179,000	
Policy And Program Execution	374,800	2,100	8,500	28,200	413,600	
Total						592,600
PROGRAM COORDINATION:						
Instructional Objectives	306,500	10,000	5,500	52,200	374,200	
Adaptation	370,300	2,000	8,000	53,000	433,300	
Accommodation	600,000	8,000	10,500	67,500	686,000	
Dissemination	289,100	2,000	63,500	156,000	510,600	
Total						2,004,100
GENERAL SUPPORT						
Data Generation	764,700	2,500	19,500	6,000	792,700	
Information Management	656,800	2,000	13,000	350,000	1,021,800	
Staff Selection and Development	431,200	2,000	95,500	19,500	548,200	
Cost Accounting	148,700	1,000	2,000	21,500	173,200	
Total						2,535,900
TOTAL DIRECT COSTS	<u>9,247,700</u>	<u>222,800</u>	<u>1,343,800</u>	<u>1,369,100</u>		<u>12,183,400</u>
OVERHEAD (23.46% of direct costs less equipment)						<u>2,805,800</u>
TOTAL						<u>\$14,989,200</u>

TABLE 8
ANNUAL COSTS FOR DEVELOPMENT AND IMPLEMENTATION
BY PROGRAM COMPONENT

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>Total</u>
INSTRUCTIONAL DESIGN AND DEVELOPMENT	\$947,100	1,686,400	1,728,000	1,230,800	660,900	6,253,200
INSTRUCTIONAL OPERATIONS	197,900	200,200	182,700	136,500	80,300	797,600
PROGRAM MANAGEMENT:						
Policy Creation and Adoption	64,800	66,800	34,100	13,300	--	179,000
Policy and Program Execution	105,200	109,500	79,000	80,600	39,300	413,600
PROGRAM COORDINATION:						
Instructional Objectives	138,600	95,600	72,000	34,000	34,000	374,200
Adaptation	68,300	127,900	138,600	75,500	23,000	433,300
Accommodation	132,300	129,800	135,100	140,800	148,000	686,000
Dissemination	121,400	123,000	103,500	80,300	82,400	510,600
GENERAL SUPPORT:						
Data Generation	174,400	180,500	138,800	148,200	100,800	792,700
Information Management	134,700	159,200	200,100	245,200	282,600	1,021,800
Staff Selection and Development	57,500	88,400	124,600	139,000	138,700	548,200
Cost Accounting	39,900	40,600	42,500	34,300	15,900	173,200
TOTAL DIRECT COSTS	2,182,100	3,007,900	3,029,000	2,358,500	1,605,900	12,183,400
OVERHEAD (23.46% of direct costs less equipment)	495,200	694,300	699,000	545,000	372,300	2,805,800
TOTAL	2,677,300	3,702,200	3,728,000	2,903,500	1,978,200	14,989,200

TABLE 9
SUMMARY OF TOTAL PERSONNEL REQUIREMENTS (1)

	1971	1972	1973	Fiscal Year 1974	1975	1976 (2)	1977 (2)
INSTRUCTIONAL DESIGN AND DEVELOPMENT	31.50 FTE	57.50	58.50	38.75	20.25	10.75	5.00
INSTRUCTIONAL OPERATIONS	7.17	6.96	5.85	4.65	2.62	2.62	--
PROGRAM MANAGEMENT:							
Policy Creation and Adoption	2.68	2.68	1.35	.50	--	--	--
Policy and Program Execution	4.70	4.72	2.99	2.97	1.20	1.20	--
PROGRAM COORDINATION:							
Instructional Objectives	7.00	4.79	3.71	1.68	1.66	--	--
Adaptation	3.45	6.65	6.65	3.45	.74	.74	--
Accommodation	6.90	6.90	6.90	6.90	6.90	2.60	--
Dissemination	3.50	3.50	2.75	1.75	1.75	1.00	.50
GENERAL SUPPORT:							
Data Generation	9.00	9.00	9.00	6.75	4.50	2.25	--
Information Management	9.00	9.00	9.00	9.00	9.00	5.00	3.00
Staff Selection and Development	1.75	3.25	4.75	5.25	5.00	3.00	--
Cost Accounting	1.10	1.10	1.04	.77	.50	.50	--
TOTALS	87.75 FTE	116.05	112.49	82.42	54.12	29.66	8.50

(1) Participation estimated in days, weeks or months was converted to FTE units on the basis of 50 weeks equals 1.0 FTE

(2) Contingency requirements which have not been costed.

TABLE 10
SUMMARY OF FTE PERSONNEL REQUIREMENTS
(Excludes graduate assistants, students and secretaries)

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>Fiscal Year</u> <u>1974</u>	<u>1975</u>	<u>1976(1)</u>	<u>1977(1)</u>
INSTRUCTIONAL DESIGN AND DEVELOPMENT	27.00	46.50	44.50	27.75	12.25	6.75	3.00
INSTRUCTIONAL OPERATIONS	6.20	5.75	4.50	3.30	1.80	1.80	--
PROGRAM MANAGEMENT:							
Policy Creation and Adoption	2.00	2.00	1.00	.50	--	--	--
Policy and Program Execution	4.00	4.00	2.25	2.25	1.20	1.20	--
PROGRAM COORDINATION:							
Instructional Objectives	1.25	.75	.75	.25	.25	--	--
Adaptation	2.25	4.25	4.25	2.25	.40	.40	--
Accommodation	2.70	2.70	2.70	2.70	2.70	1.00	--
Dissemination	3.50	3.50	2.75	1.75	1.75	1.00	.50
GENERAL SUPPORT:							
Data Generation	6.00	6.00	6.00	4.75	3.00	1.75	--
Information Management	6.00	6.00	6.00	6.00	6.00	4.00	2.50
Staff Selection and Development	1.25	2.75	3.75	4.25	4.00	2.50	--
Cost Accounting	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.75</u>	<u>.50</u>	<u>.50</u>	<u>--</u>
TOTAL	<u>63.15</u>	<u>85.20</u>	<u>79.45</u>	<u>56.50</u>	<u>33.85</u>	<u>20.90</u>	<u>6.00</u>

(1) Contingency requirements which have not been costed.

TABLE 11
SUMMARY OF OTHER PERSONNEL REQUIREMENTS
(Reported in Weeks) (1)

	1971	1972	1973	Fiscal Year		1976(2)	1977(2)
				1974	1975		
INSTRUCTIONAL DESIGN AND DEVELOPMENT	225.00 wks	550.00	700.00	550.00	400.00	200.00	100.00
INSTRUCTIONAL OPERATIONS	48.40	60.40	67.40	67.40	40.80	40.80	--
PROGRAM MANAGEMENT:							
Policy Creation and Adoption	34.00	34.00	17.60	--	--	--	--
Policy and Program Execution	35.00	36.00	37.00	36.00	--	--	--
PROGRAM COORDINATION							
Instructional Objectives	287.30	202.00	147.80	71.30	70.30	--	--
Adaptation	60.00	120.00	120.00	60.00	17.00	17.00	--
Accommodation	210.00	210.00	210.00	210.00	210.00	80.00	--
Dissemination	--	--	--	--	--	--	--
GENERAL SUPPORT:							
Data Generation	150.00	150.00	150.00	100.00	75.00	25.00	--
Information Management	150.00	150.00	150.00	150.00	150.00	50.00	25.00
Staff Selection and Development	25.00	25.00	50.00	50.00	50.00	25.00	--
Cost Accounting	5.00	5.00	2.00	1.00	--	--	--
TOTAL (weeks)	1,229.70	1,542.40	1,651.80	1,295.70	1,013.10	437.80	125.00

(1) Fifty weeks is equivalent to 1.0 FTE

(2) Contingency requirements which have not been costed.

PART VII

A PRELIMINARY PLAN FOR IMPLEMENTING A COMFIELD BASED
TEACHER EDUCATION PROGRAM ON A STATEWIDE BASIS

Contents

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A PRELIMINARY PLAN FOR IMPLEMENTING A
COMFIELD BASED TEACHER EDUCATION PROGRAM
ON A STATEWIDE BASIS

Larry L. Horyna
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Teaching Research

Oregon: A Context for Coordinated Effort

Throughout its developmental history, the ComField Elementary Teacher Education model has been characterized by the active involvement of all those institutions, agencies, and organizations which would ultimately be most directly affected by its implementation. Although the model's initial phase of development occurred under the sponsorship of a broad-based, regional consortium, its further development, in Phase II, was localized to Oregon with OCE serving as the pilot or lead institution for a statewide consortium.¹ More specifically, the work reported in this document is the product of a partnership involving six state colleges and universities, a private college and a state sponsored research and development agency. This partnership has come to be known as the Oregon Consortium. The names, and geographic distribution of the various member institutions appear in Figure 1 in the Preface.

From the outset it has been recognized that the implementation of a model based program of the magnitude and complexity of the one proposed would require resources beyond those available within a single institution and working relationships between institutions and agencies that have not had a history of working together. This is particularly true in Oregon, where for the past sixty years higher education has operated under a program of statewide coordination. As members of the Oregon State System of Higher Education, OCE and all other state supported institutions must comply with those curricular change guidelines ascribed to by the system as a whole. These well-established guidelines serve to regulate and coordinate the curricular change process

¹ Care should be taken to discriminate between the terms "consortium" and "coalition." As used in this report the term "consortium" refers to the composite entity of those institutions listed on Figure 1, p. xii the term "coalition" refers to any one of these institutions along with its cooperating public school systems and those organizations and agencies which have a direct relationship to that particular context, e.g., State Department of Education, professional education associations, etc.

in Oregon's public colleges and universities and must be strictly adhered to if a new or different type of program, like the one proposed, is to gain official sanction. While such a unified educational system does place a definite constraint on unilateral decision making regarding curricular changes it also provides a mechanism for ensuring that such changes will occur in an integrated, consistent manner within the context of a total state. This reality, coupled with the diffusion potential of the national models program, provided the basis for a four-point rationale for the adoption of a consortium strategy in Oregon.

1. The requirements for implementing a model teacher education program will vary according to the setting of each institution, and in order to obtain evidence of the feasibility of implementing a ComField based program in various settings feasibility studies need to be conducted in a variety of institutions;
2. The implementation of a model based program on a statewide basis would provide a test of the model's effectiveness on a sufficiently diverse economic and social segment of the nation that, if successful, will convince many of the ultimate utility of the model who would otherwise be doubtful;
3. The statewide implementation of a model program will provide a test of a dissemination-diffusion model that could have considerable utility in optimizing the impact of the OE models program across the nation generally; and
4. The implementation of a model based program on a statewide basis has the potential of increasing the quality of teacher education in a significant segment of the nation.

The consortium strategy also facilitated the development of the program that has been proposed by the OCE coalition, for throughout its development it was sensitive to the concerns and circumstances of the various institutions within the statewide consortium. Because of original Phase II planning on a statewide basis and a commitment to statewide development even though funds to support such development were severely reduced (see Preface) considerable effort was devoted to keeping consortium institutions apprised of that which was occurring at OCE and securing their advice relative to it. This was accomplished largely through the efforts of an inter-institutional Review and Advisory Panel that consisted of one representative from each consortium institution and a selected representative from one of their cooperating schools.¹

Throughout the project this group provided an active link between OCE and the other institutions in the Consortium. Their role in the

1

The membership of the Review and Advisory Panel appears in the Acknowledgements.

project involved two primary functions:

1. The critical review of all parts of the OCE developmental effort in terms of its generalizability to other institutions in the consortium; and
2. The dissemination of information about the developmental effort to their respective constituencies, and getting reactions to its acceptability in light of their own circumstances.

On the basis of this direct involvement, all members of the Oregon consortium share a common commitment to: 1) the general design of the proposed program; 2) the belief that the program developed should be generalizable to other institutions that prepare teachers; and 3) further participation in the development and implementation of the model based program on a statewide basis. Letters conveying these commitments appear in Appendix O.

Although the efforts just described to carry program development forward on a statewide basis were compensatory at best, they did provide the basis for continued development as a state. While the members of the consortium are aware that the major thrust of any federally sponsored program development and implementation effort will focus on the OCE coalition they have the desire to participate to the fullest extent possible in that development for such involvement is seen as prerequisite to the ultimate implementation of the program on a statewide basis. The remainder of the chapter is devoted to an explication of a plan for statewide development and implementation.

Preliminary Planning

It is generally recognized that the program developed and implemented at OCE will never be directly transferable to any other institution. It is also recognized, however, that if the materials and procedures developed at OCE can be adapted to fit the unique circumstances of other institutions, the program developed by the OCE coalition will have utility for other institutions. As a consequence, the statewide implementation plan is geared toward optimizing the process by which other coalitions within the consortium can build upon and profit from developmental efforts at OCE. Recognizing that there will be differences in the programs developed in the various institutions and that each institution will move at its own rate in adopting a model based program, the statewide implementation plan allows for maximum flexibility. The general dimensions of this plan appear in schematic form in Chapter 3, p. 62.

As currently envisioned, the statewide implementation plan calls for each consortium institution to: a) closely monitor that which emer-

ges from the OCE coalition, b) determine its acceptability for adoption within the context of their own coalition, c) where necessary modify the materials and/or procedures to fit the demands of institutional or coalition differences, d) implement that which has been adopted or adapted, e) evaluate the effectiveness of the materials or procedures so utilized and determine the cost of their implementation, f) make the adapted products and/or procedures available to other consortium members. While the plan has been explicated as if it were linear in operation, it will be a dynamic process. Closely coordinated relationships will exist between all participating institutions; means established for expediting the exchange of materials and information between institutions; and a level of funding support will be provided which will enable consortium members to carry out needed monitoring, adaptation, and implementation activities.

The objective of the preliminary plan is to provide a general framework through which institutions in the Oregon Consortium can influence but not control the OCE developmental effort and benefit from it by taking from it that which has utility in their own developmental efforts. Implicit within this objective is the commitment to the idea that each participating institution and its cooperating public schools must make its own determination as to the manner and level of its involvement with the OCE developmental effort, assuring thereby that institutional integrity and autonomy will not be violated. Such a procedure will enable each member institution to determine a course of action which is consistent with the realities of their own unique setting. This freedom of choice will allow institutions to participate in activities ranging from simply monitoring the OCE effort to activities which involve them in the actual development, field testing, adaptation or adoption of various components of the program developed in the OCE coalition. An underlying assumption of the plan is that OCE, as the pilot institution in the Consortium, will support the individual efforts of the other consortium institutions by ensuring that they have ready access to all or parts of that which is developed at OCE.

Managing the Statewide Implementation Plan

Although the statewide implementation has not been spelled out in detail, it will obviously require careful management. The various aspects of the program must be coordinated in some real sense; the various institutions must be allowed to monitor OCE's efforts in some meaningful way; the quality of what is done around the state must be assured; institutions must be informed about the efforts of their partners in the consortium; institutions must be supported in their efforts to move forward within the context of their particular settings. At one level order will be brought to the implementation effort by the procedures which regulate curricular change within Oregon's publically supported colleges and universities. Another level of management must be introduced, however, to manage the many activities which must necessa-

rily precede the implementation of all or parts of the model based program in the consortium institutions. It is anticipated that the second level of management will include the following components:

1. A Review and Advisory Panel
2. A Project Coordinator
3. A ComField Advisory Committee

The functional relationships expected to exist between these components are depicted in Figure 22.

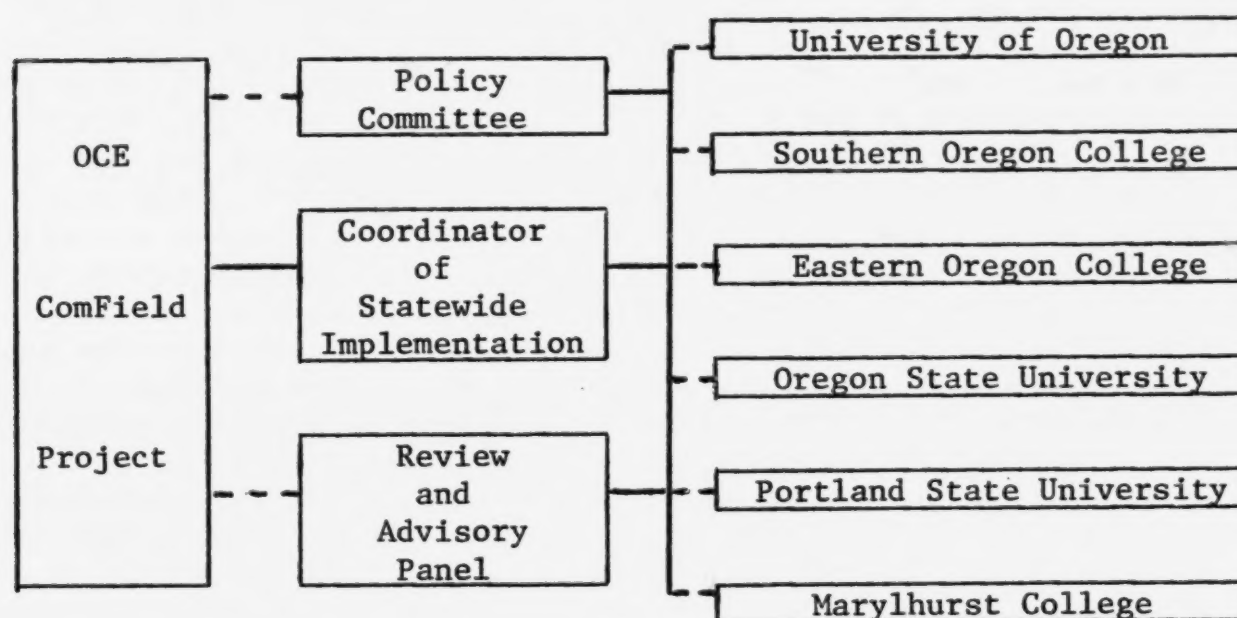


Figure 22. Proposed Management Structure for the Statewide Implementation Plan.

The Review and Advisory Panel

As discussed previously, the major vehicle through which statewide involvement was assured in Phase II was the Review and Advisory Panel. This group made a number of important contributions to the model program as it now stands and conscientiously kept their colleagues informed of developments within the program. As a consequence, to ensure consistency of effort and to facilitate a continued relationship to the project on the part of those who are most familiar with it, it is projected that the structure and membership of this group will be retained in Phase III. The complexities, time requirements and importance of the Review and Advisory Panel's role will necessitate the allocation of resources for the support of its members. This will allow them to be released from some of their present responsibilities in order to devote

attention to model program activities.

Coordinator of Statewide Development and Implementation

While the primary responsibility for managing the statewide development and implementation effort will reside with the Review and Advisory Panel, their efforts will be supported by a Coordinator for Statewide Development. It is anticipated that this will be a full-time project position with responsibility for providing leadership, direction, and support for the overall effort. In this sense the coordinator will serve a key function in maintaining the consistency and congruence of the statewide implementation process as well as expediting the flow of information between and among the institutions within the consortium.

The Policy Committee

The Policy Committee carries the responsibility for reviewing all project activity, making recommendations relative to that activity, and establishing broad policy decisions relative to teacher education in the state as it pertains to the project. As with the Review and Advisory Committee, it is anticipated that the persons making up the Policy Committee for the Phase II project will carry forward in the same capacity. As presently constituted the committee is composed of the deans and directors of teacher education programs in the seven colleges within the consortium, the chairman of the Department of Family Life at Oregon State University (whose department is responsible for the preparation of teachers of young children in the state), the Vice-Chancellor for Academic Affairs, Oregon State System of Higher Education, the Director of Teacher Certification Programs, Oregon State Department of Education, three representatives from the public schools, and two students from the elementary teacher education program at OCE. The Policy Committee is an expansion of the deans and directors of teacher education programs in the Oregon State System of Higher Education. It will meet upon call during the course of the project, and will be chaired by the Vice-Chancellor for Academic Affairs, OSSHE.

Schedule of Events and Resource Requirements

During the first year of the Phase III effort statewide developmental activities will serve essentially to bring all institutions within the consortium to the place where they can make a sound judgment as to when and how they wish to pursue implementation of the proposed program in their particular settings. In a sense these activities will realize the objectives which were not achieved in Phase II due to lack of funds. In general terms each institution in the consortium will follow a four-step procedure for testing the feasibility of adopting all or parts of the proposed program:

1. Orient separately the various groups within a coalition to the nature of the proposed teacher education program and the part that each constituency within the coalition would play within the program. Operationally this means orienting separately such groups as the elementary education faculty, the faculty of the department or school of education as a whole, the faculty of the college as a whole, the administration of the college, and the staff and administration of the school districts who would be participating with the college in the implementation of the program;
2. Bring representatives from each of the constituencies within the coalition together for a joint program planning exercise and obtain a collective judgment as to the feasibility of adopting such a program. The experience of the OCE coalition in carrying out such a planning exercise could be of value in this activity;
3. Conduct a second joint planning exercise wherein a plan of implementation would be judged as to its feasibility. Such a plan would need to address itself to implementation at both the local coalition level and the statewide consortium level;
4. Draft a formal statement describing the feasibility of implementing such a program by each of the constituents within the coalition, and the basis upon which that judgment is made.

These activities will be coordinated at each institution by a member of the faculty of that institution, supported, as needed, by the Coordinator for Statewide Development, staff of the OCE Coalition, and Teaching Research.

Because all institutions in the Consortium need to engage in this feasibility testing process, irrespective of their readiness to initiate program changes, it is possible to obtain a fairly realistic estimate of the fiscal resources required to carry out the first year's activity. (See detailed budget, Page 237.) As a result of this activity each institution participating in the consortium will have by the end of the first year of the implementation effort a detailed plan for their participation in it.

Until these plans are developed it is difficult to estimate long range resource requirements. In addition, it is anticipated that each of the consortium institutions will have differing requirements and that these requirements will change through time depending upon the nature of those activities in which they plan to be engaged. The allocation of resources to support statewide implementation, therefore, must be flexible and allow for institutional differences. It is anticipated that resource allocation within the consortium will occur through a process which will require the submission, review, and approval of institutional

implementation plans on a yearly basis. However, for the purpose of arriving at a gross estimate of the long range resource requirements of the statewide implementation effort, a basic formula has been developed and applied as outlined on Page 63 of this report. The grand total as projected through the application of this formula amounts to some \$1,288,767 over a five-year period. The following provides a estimated yearly breakout of these projections.

Year I

Line item projections on the following page \$ 208,767

Year II

Allocations to be made on the basis of institutional plans submitted prior to the beginning of the fiscal year.
An estimated 240,000

Year III

Allocations to be made on the basis of institutional plans submitted prior to the beginning of the fiscal year.
An estimated 240,000

Year IV

Allocations to be made on the basis of institutional plans submitted prior to the beginning of the fiscal year.
An estimated 300,000

Year V

Allocations to be made on the basis of institutional plans submitted prior to the beginning of the fiscal year.
An estimated 300,000

TOTAL \$1,288,767

Resource Allocations for Statewide Implementation
Year I

I. Direct Costs

A. Personnel

Coordinator: 1.0 FTE for 12 mos. @ \$11,000/annum	\$ 11,000
Review and Advisory Panel members 12 @ .5 FTE for 12 mos. @ \$14,000/annum	84,000
Institutional FTE available for feasibility testing 30 @ .10 FTE for 12 mos. @ \$14,000/annum	42,000
Secretarial: 1 @ .50 FTE for 12 mos. @ \$4,800/annum	4,800
6 @ .25 FTE for 12 mos. @ \$4,800/annum	7,200
Employee Benefits: 9.0% of salaries	<u>9,978</u>
Subtotal	158,978

B. Travel

In-state for Coordinator: 10,000 miles @ 8¢/mile	800
In-state for all Review and Advisory Panel members 6 institutions x 2 @ 2,000 miles @ 8¢/mile	<u>1,920</u>
Subtotal	2,720

C. Per Diem

In-state for Activity Coordinator: 24 days @ \$13/day	325
In-state for Review and Advisory Panel members 8 days x 6 institutions @ \$13/day	624
Meals for 18 CPX's x 60 people @ \$2.50/meal	<u>2,700</u>
Subtotal	3,649

D. Supplies and materials

Coordinator	500
Institutional activities \$300 x 6 institutions	<u>1,800</u>
Subtotal	2,300

E. Communications

Coordinator	250
Institutional activities \$200 x 6 institutions	<u>1,200</u>
Subtotal	<u>1,450</u>
Total Direct Costs	169,127

II. Indirect Costs @ 23.46% of Direct Costs 39,677

III. TOTAL COSTS \$208,767

PART VIII

NOTES ON MAXIMIZING THE INFLUENCE OF
DEMONSTRATION PROGRAMS ON TEACHER EDUCATION
REGIONALLY AND NATIONALLY

Contents

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NOTES ON MAXIMIZING THE INFLUENCE OF
DEMONSTRATION PROGRAMS ON TEACHER EDUCATION
REGIONALLY AND NATIONALLY

H. Del Schalock
Teaching Research

From the outset the strategy of the OE Models Program has been straight forward and sound: through competitive proposals generate a set of alternative models for elementary teacher education programs; through a second set of competitive proposals undertake careful feasibility studies of the implementation of the initial set of models, or any combination of them; and finally, if the feasibility studies are at all encouraging, implement 2 to 4 model based programs as exemplary programs for elementary teacher education in the nation. The rationale underlying the strategy for the first two phases was basically one that relied upon the productivity of competition, governed by the strengths of carefully planned projects. The rationale underlying the third phase is that which underlies all demonstration or experimental programs, namely, the power of ideas in operation. John Dewey built the case for such programs before the turn of the century:

"...I heard once that the adoption of a certain method in use in our school was objected to by a teacher on this ground: 'You know that it is an experimental school. They do not work under the same conditions that we are subject to.' Now, the purpose of performing an experiment is that other people need not experiment; at least need not experiment as much, and that they may have something definite and positive to go by. An experiment demands particularly favorable conditions in order that results may be reached both freely and securely. It has to work unhampered, with all the needed resources at command. Laboratories lie back of all the great business enterprises of today, back of every great factory, every railway and steamship system. Yet the laboratory is not a business enterprise; it does not aim to secure for itself the conditions of business life, nor does the commercial understaking repeat the laboratory. There is a difference between working out and testing a new truth, or a new method and applying it on a wide scale, making it available for the mass of men, making it commercial. But the first thing is to discover the truth, to afford all necessary facilities, for this is the most practical thing in the world in the long run. We do not expect to have other schools literally imitate what we do. A working model is not something to be copied; it is to afford a demonstration of the feasibility of the principle, and of the methods which make it feasible. So (to come back to our own point) we want here to work out the problem of the unity,

the organization of the school system in itself, and to do this by relating it so intimately to life as to demonstrate the possibility and necessity of such organization for all education."

Assuming that the Phase I and II strategy has been successful, that is, that strong models have been developed and that it is feasible to implement them, the long range success of the models program depends upon the impact which the demonstration program will have upon the educational community. In the judgment of those who have been responsible for working with the ComField Model thus far, maximum impact will not come from simply establishing an exemplary program at an institution and then making it known to the educational community that such an institution exists. Rather, the widespread diffusion of an educational change as far reaching as that proposed in most of the models will require more than a purely demonstration and dissemination effort. The purpose of this section of the report is to set forth a proposal as to how the impact of the third phase of the models program can be maximized.

The Proposal in Brief

Fund at least two and preferably three or four exemplary programs; establish a functional information and materials exchange network between exemplary programs; nest each of the exemplary programs within a state-wide plan for implementation; and nest all of the exemplary and state-wide programs within an integrated network of the regional laboratories and private enterprises. Operationally the plan calls for: a) two to four exemplary programs to be established across the nation (the criteria for selection of such programs are yet to be established; b) implementation of each exemplary program on a state-wide basis; c) link each exemplary and state-wide demonstration program to all regional laboratories for the dissemination of information about them to all institutions within a region which have elementary teacher education programs; and d) link each exemplary and state-wide demonstration program to the educational publishing industry for the mass production and marketing of the materials and/or procedures developed by those programs and for the services required by institutions in attempting to implement them in their own programs. In addition, each exemplary program would need to link effectively to the research and development efforts occurring within the nation that contribute to either elementary education or elementary teacher education. The interdependencies between the exemplary program, the state-wide implementation of those programs, the regional laboratories, the educational publishing industry, research and development activities in education across the nation, and teacher education programs throughout the nation are illustrated schematically in Figure 23.

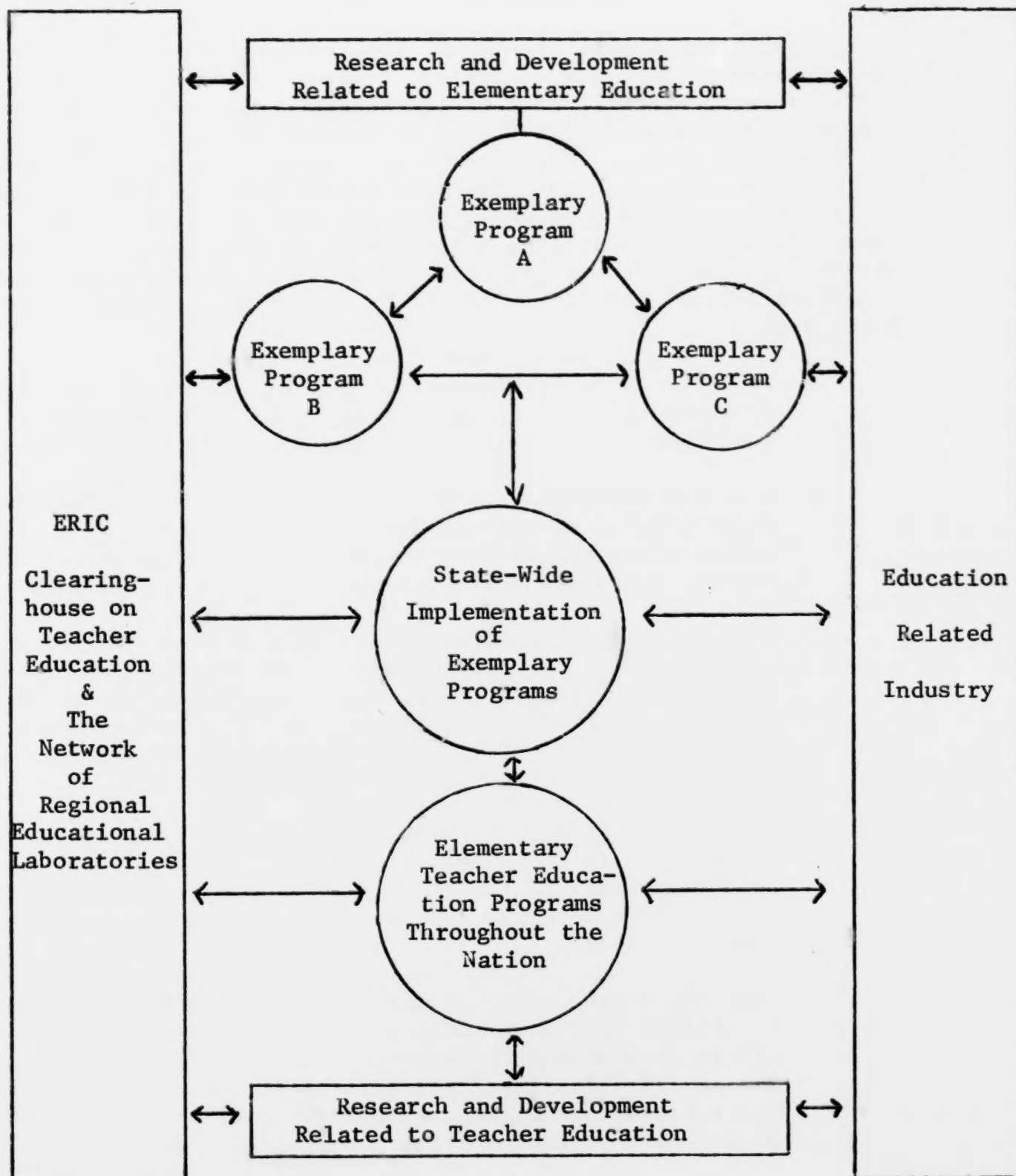


Figure 23. A schematic illustration of the interaction of institutions and agencies in a plan designed to maximize the impact of Phase III of the OE Models program in elementary teacher education in the nation.

Rationale Underlying the Proposal

The central assumption underlying the proposal just sketched is that to effect change in elementary teacher education on a national scale, such change will have to be carefully planned for, and all the resources available in the nation in support of such change will have to be brought to bear in a finely coordinated fashion. This includes not only the coordination of exemplary programs, but the coordination of teacher education programs within the states in which the exemplary programs rest, the coordination of the regional laboratory network in a massive dissemination effort, and the coordination of education related industry with all of the above. Attending assumptions are:

- 1) that the basic developmental work in support of the exemplary programs needs to be carried out within the context of the institution responsible for the implementation of the program;
- 2) that the materials and procedures developed within the exemplary program need to be validated against a wide variety of institutions before they are made available generally to teacher education institutions throughout the nation;
- 3) that private enterprise is best able to take the prototype materials that have been developed within the exemplary and state-wide programs refine them, mass produce them, market them across the nation, and provide the supporting services (including in-service education) required for their utilization in other teacher education programs;
- 4) that the ERIC Clearinghouse on Teacher Education is best equipped to take the prototype materials describing the exemplary programs and the materials that have derived from them, refine them, and prepare them for use in nation-wide dissemination;
- 5) that the regional educational laboratories are best equipped to utilize the materials developed by ERIC in a nation wide effort to disseminate information about the exemplary programs and the products that have derived therefrom (the efforts of the laboratories will be supplemented by advertising efforts on the part of the materials publishers); and
- 6) that the products of research and development efforts throughout the nation have to be monitored consistently for their utility in the exemplary programs, and in those institutions utilizing materials that derive from the exemplary programs.

It is recognized in making such a proposal that none of the institutions mentioned carry on in pure form the functions assigned them:

regional laboratories carry out developmental as well as dissemination functions; education related industries disseminate huge amounts of information; and the exemplary programs will, in all likelihood, be involved in research as well as developmental activities. Nor does the proposal assume that such an interplay of functions will cease. It does assume, however, that the institutions assigned a primary function in the plan are those that are best able to carry out major responsibility for those functions, and if carefully coordinated could bring those functions to bear in a manner which would maximize the impact of the overall effort.

Rationale Underlying the Creation of Several Exemplary Programs

As a general rule planners find it dangerous to "put all of their eggs in one basket." This is particularly true when the various "baskets" available have not as yet been tested operationally for their effectiveness. At the present stage of knowledge, and in light of the complexity of the various models being proposed, it would seem imperative to test as many of the model programs as is economically possible. Since it is likely that all eight of the models available will not be implemented with equal federal support, choices will have to be made. While the criteria for making such choices have not as yet been defined, a general rule to follow would seem to be one that would maximize differences, given equal quality on other criteria. Another factor to consider, again assuming equality on other criteria, is the geographic location of the exemplary programs selected. Geography is a significant variable politically, logistically, and as a source of identification. What weight it should have in the matter of institutional selection for implementation purposes is unclear, but it is a variable that must be considered.

Rationale Underlying the Creation of an Information and Materials Exchange Network Between Exemplary Programs

The magnitude of the materials development task facing those implementing exemplary teacher education programs, the commonality of the logistical and operational procedural problems to be overcome, and the commonality of the subject matter around which instructional materials are to be developed suggests that considerable economy could be effected if those responsible for implementing a given program had free access to that which was being developed in other programs. This is not to imply that all materials developed in one program will be directly or indirectly applicable to another. It does imply, however, that much of what is done in one program will have some degree of utility in another, and whatever savings in time and resource expenditure can be effected thereby, should be effected.

Given this rationale it could be argued that institution A should be responsible for developing one aspect of an overall program, institution B another aspect of the overall program, etc. On the surface there is a logic to such an arrangement and the likelihood of considerable economy. Operationally, however, it is doubtful that it would be an effective way to proceed. While there will be obvious commonalities between programs each will be relatively idiosyncratic with respect to how such commonalities are put together. Also each program will have characteristics unique unto itself. The major strength in the entire models development effort has been the opportunity to synthesize and integrate the knowledge and ideas and procedures that are common to the field into a unique and interdependent whole that represents a given model. To not honor that integrity at the time of implementation would be to deny the fundamental strength that has derived from the program up to this time. Farming out pieces and parts of a program to various institutions to develop, or attempt to develop only those pieces and parts that are common to all models, would lead in effect to a kind of dismemberment of each of the models that would destroy the strengths inherent in them.

Rationale Underlying the Implementation of Exemplary Programs on a State Wide Basis

To have maximum impact upon elementary teacher education nationally, demonstration programs must have high visibility. They must also have high credibility. The proposal being made suggests that one of the best ways possible to gain both is to implement the program on a state-wide basis. Such a strategy would provide evidence as to the feasibility of implementing the program under a variety of contexts, it would provide a range of alternative institutions with which an adopting institution could identify and/or work with, it would provide a natural setting for the field testing of materials before they were marketed, it would be of sufficient political significance that it would not be ignored nationally, etc., etc. The full range of arguments in support of state-wide implementation have been provided in Chapter 3 and Part VII.

Rationale Underlying Linkage to the Network of Regional Laboratories

While implementation on a state-wide basis would provide for program visibility and credibility, there remains the problem of getting detailed information about the program to institutions interested in its adoption. Are the demonstration institutions to carry out the dissemination function? Will the ERIC Clearinghouse on Teacher Education? While both will undoubtedly play major roles in the dissemination effort, it is doubtful that they would be able to reach all institutions in the nation that prepare elementary teachers in a way which lets those institutions come to fully understand the nature and scope of the exemplary efforts.

Another logical resource available to the dissemination effort is the regional laboratory network. The involvement of the laboratories in such an effort would be in keeping with the original intent of the system, and would make use of the extensive information networks that most laboratories have established with teacher education institutions. It would also permit the dissemination process to be more personalized in that personnel within a laboratory are generally knowledgeable of the idiosyncracies of the institutions within their regions having elementary teacher education programs, and they could help interpret the demonstration programs accordingly.

Operationally, by linking the demonstration institutions and ERIC to the laboratory network, the dissemination function could work as follows:

1. Each demonstration institution would assume responsibility for developing prototype materials that describe the program being implemented;
2. Staff from the ERIC Clearinghouse on Teacher Education would take these prototype materials, refine them, and reproduce them in quantities sufficient for distribution by ERIC, the laboratories, the demonstration programs, etc.;
3. Each of the regional laboratories would be responsible for informing each of the institutions within their region that prepare elementary teachers about each of the exemplary programs underway, how those institutions might get additional information about such programs, how they might gain access to specific materials and/or procedures developed within those programs, etc.; and
4. Each of the demonstration institutions, and their sister institutions within a state, would establish a procedure whereby persons coming for on-site inspection of the program could be accommodated efficiently and effectively.

Rationale Underlying Linkage to the Educational Publishing Industry

While the dissemination of information about the demonstration programs is a necessary condition to widespread impact, it is not a sufficient condition. In addition to information, adopting institutions must have access to the materials and procedures needed to make such programs operate. A critical question to be faced is how such access is to come about.

As in the case of dissemination, the demonstration institutions will simply not be equipped to produce and distribute materials on a scale that would support wide scale adoption. While resources are

expected to be made available in support of materials and procedural development within demonstration institutions, that which derives from them will be in "home made" form and in a limited number of copies. Even if materials were available for wide scale distribution, demonstration institutions would be in no position to provide the consultants, training, and follow-up services that will be needed by adopting institutions to effectively integrate the new materials and procedures into their ongoing programs. If the fruits of the implementation efforts are to have maximum payoff nationally there must be provision for the production and distribution of the materials that emerge from the demonstration programs on a scale which will make it possible for every institution in the nation desiring their use to be able to do so. In the collective judgment of those who have worked with the ComField Model the only feasible way to produce and distribute the materials and services needed in support of widespread program adoption is to involve the private sector.

Operationally the relationship between industry and the other institutions involved in the implementation effort might be as follows:

1. Educational materials production firms would consult with demonstration institutions during the development of the materials and procedures needed in support of program operation (each exemplary institution would probably work with a different representative from industry);
2. Once developed and appropriately field tested, the producing firm that has been monitoring their development will "package" them, reproduce them in the quantities needed, market them, and provide the service functions needed in support of their utilization;
3. As materials become available for distribution the producer will provide ERIC and the regional laboratory network with detailed descriptions of the materials that are available, the requirements for their utilization, cost, how they might be obtained, etc. This information can be disseminated through ERIC and the laboratories as well as through the channels ordinarily used by industry; and
4. Each of the exemplary institutions and the institutions within a state committed to the implementation of a model based program will develop an efficient and effective means of demonstrating the materials being marketed for those who wish to make on-site inspections.

Rationale Underlying the Linkage to Research and Development Activities Across the Nation

By and large the elementary teacher education models that have derived from the phase I and II efforts have a minimal empirical base. Also the materials to be used within the program are by and large in a "projected state" rather than an existing, empirically tested state. This is not the fault of the model builders, for in all cases they have used that which has been available to them. It does suggest, however, that all of the proposed programs are only approximations of what they could be, and in order to continuously grow in effectiveness they will need to continuously expand the knowledge base, the materials and the methodology on which they rest. This can be done by closely monitoring that which emerges from educational R & D efforts around the nation and by carrying out a vigorous research and evaluation program within context of the demonstration effort.¹

Management Procedures Needed to Implement the Proposal

Specifying that linkages of the kind described should occur between institutions and agencies of the variety proposed is one consideration; developing the wherewithall that permits such linkages to function through time is another. Obviously, an extremely complex management system would be required to make such relationships work. Some preliminary ideas as

¹Actually, the implementation of the demonstration program will provide a unique opportunity to extend our understanding of the educative process because in all cases the models are data dependent. Without exception the models are committed to systems design principles, and this requires that empirical data be continuously gathered on the effectiveness of program operations. As such, vast amounts of data will be available to those who operate the program and it would be an indefensible waste of resources if that information is not used to its limits in extending our base of understanding in the teaching-learning process. While it is true that much of the information that will be collected within the context of the program will be done so outside of the constraints of traditional research paradigms, and therefore may be lacking in its generalizability, the absence of such rigor in design does not render such data useless. Assuming that the measures used are valid, and that the questions being asked are of a kind that do not require the rigor of experimental design, great amounts of information can be obtained that has high usability to both persons attempting to operate the program and to extend the empirical base of the discipline.

to what such a management system might look like are outlined in the paragraphs which follow.

A Structure that Could be Used to Link Demonstration Programs

An informal structure characterized by frequent "coordinating contacts" between project directors and the director of the models program in the U.S. Office of Education; periodic cross-site visitations by key personnel within each of the implementing institutions.

A Structure that Could be Used to Link Demonstration Programs to State-Wide Implementation Efforts

The structure proposed to support the state-wide implementation effort in Oregon (see Chapter 3 and Section VII), provides an example.

A Structure that Could be Used to Link Demonstration Programs and State-Wide Implementation Efforts to the ERIC Clearinghouse for Teacher Education and the Network of Regional Educational Laboratories

A formal structure wherein the individuals responsible for dissemination functions within the demonstration programs would meet periodically with representatives from each of the regional laboratories, the ERIC Clearinghouse for Teacher Education, and the director of the models program from the Office of Education, to plan and coordinate the national dissemination effort. This body could be labeled the "Dissemination Council."

A Structure that Could be Used to Link Demonstration Programs and State Wide Implementation Efforts to the Educational Publishing Industry

A formal structure wherein the persons responsible for overall program development and dissemination within each of the demonstration institutions, representatives from the private sector working with demonstration institutions, director of the OE models program, meet regularly to plan and coordinate materials distribution and program support efforts. This structure might be called "the Products Development and Utilization Council."

A Structure that Could be Used to Link Demonstration Programs to National Research and Development Efforts

A formal structure wherein the person responsible for overall program development within each of the demonstration institutions, a representative from each of the federally supported research and development centers across the nation, and the director of the OE models program, meet periodically to review emerging knowledge and/or products that might have utility to the models program, and to make known the needs of the models program to those charged with responsibility for R & D efforts. This group might be called "the Research and Development Council."

A Structure that Could be Used to Coordinate All Facets of the Dissemination and Diffusion Effort

A formally constituted structure wherein the project directors at each of the demonstration institutions, a representative from the network of regional laboratories, a representative from the network of federally supported research and development centers, a representative from the industrial firms supporting the dissemination-diffusion effort, a representative from the ERIC Clearinghouse for Teacher Education, a representative from each of the states committed to implementing the demonstration program, and the director of the OE models program, meet at regular intervals to establish policy governing the overall implementation-diffusion effort. This group might be called "the Coordinating Council."

Evaluating the Effectiveness of the Overall Dissemination-Diffusion Effort of the OE Models Program

Because of the magnitude of the dissemination-diffusion effort, its criticalness, and its potential contribution as a model for other nationwide educational change efforts, the entire procedure needs to undergo careful and continuous evaluation. In this regard it would seem appropriate to let independent bids for the evaluation effort, thereby assuring the best evaluation design possible within the present limits of our knowledge and a relatively independent or unbiased assessment of that which actually emerges from the program. Minimally, however, the request for evaluation proposals should require an evaluation design that is "formative" in nature, that is, continuous in its provision of corrective feedback from the initiation to the completion of the project, and "summative" in nature, that is, a final assessment of the impact of the overall program upon teacher education in the nation. In addition the request for proposals should require that the evaluation design attend specifically to the operation of each of the institutions and/or agencies contributing to the overall effort, as well as the effort as a whole.

Allocating Resources for the Management and Evaluation of the Dissemination-Diffusion Effort

It is assumed that resources must be set aside within the OE models program to accommodate the energy required to carry out such management functions.